IAMP

draft DESIGN CODE

INTERNATIONAL
ADVANCED
MANUFACTURING
PARK

INTERNATIONAL ADVANCED MANUFACTURING PARK

Contents

urbed

January 2018

This draft Design Code has been produced by URBED on behalf of IAMP LLP.

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Structure of the Design Code

This Code is issued in draft form to guide development pending formal approval through the process of the emerging DCO for IAMP TWO.

The IAMP Area Action Plan 2017-2032 (AAP) was approved by the Secretary of State and adopted by both South Tyneside Council and Sunderland City Council in November 2017.

The AAP set out the vision for IAMP:

'A nationally important and internationally respected location for advanced manufacturing and European-scale supply chain industries. A planned and sustainable employment location that maximises links with Nissan and other high value automotive industries as well as the local infrastructure assets, including the ports, airports and road infrastructure.'

The AAP also set out the type of place which the Councils want:

'an attractive working environment that creates the conditions in which businesses can establish and thrive and where people choose to work. A unique opportunity for increased job and business creation and the promotion of regional prosperity whilst taking advantage of natural assets and green infrastructure including the River Don corridor.'

The AAP contained specific references to the production of a Design Code: **Policy S1: Spatial Strategy for Comprehensive Development** Part (4) *'Requires Design Codes to be submitted that will demonstrate how development ensures the proposed development is designed and orientated to relate well to the existing employment area and Enterprise Zone'*; **Policy D1 Masterplan Design** states that proposals *'must be accompanied by a Design Code for approval by the Councils.'*

Section 4 of the AAP sets out the design guidelines and masterplan principles necessary to achieve *'comprehensive delivery of a high quality, internationally renowned business park.'*

The draft **IAMP Design Code** has been developed in response to the requirements set out in the Area Action Plan. Covering the whole of IAMP, the Design Code sets out how the design guidelines sought within the AAP will be achieved.

The Design Code will be formally signed off through the DCO process.

The diagrams on pages 6-12 demonstrate how the Design Code is addressing the various requirements set out within the AAP.

The Design Code will offer a greater level of practical detail for developers, architects and their design teams on the requirements that need to be met when putting forward proposals within IAMP.

The Code should be read in conjunction with the Area Action Plan and the Councils' respective Statutory Plans, which sets out the key agreed parameters and a series of strategic policies, design guidelines and masterplan principles to guide the development of this nationally significant development.

What is a design code?

Design codes are a distinct form of detailed design guidance. (*Preparing Design Codes - a practice manual* DCLG 2006)

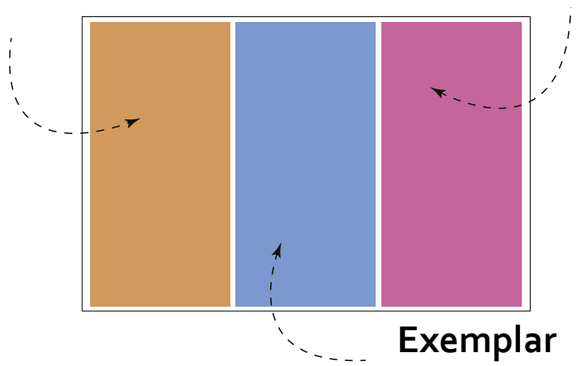
A Design Code is a set of written and graphic rules that establish with precision the two and three dimensional design elements of a particular development or area – and how these relate to one another without establishing the overall outcome.

A Design Code aims to provide clarity over what constitutes acceptable design quality for a particular site or area, and thereby provide a level of certainty for developers and the local community alike. Codes provide a positive statement about the particular qualities of a place, and are focused around those design characteristics that are important to achieve, and they establish and firmly fix the 'must have' design elements.

In so doing Design Codes help to provide continuity in quality and consistency over time.

Introduction to the Design Code elements

The Code components



Exemplar pictures

How the Design Code will be set out.

The IAMP Design Code will help shape development as it comes forward, setting out the broad parameters that should be responded to by development and providing a point of reference for the level of quality that will be expected.

The IAMP Design Code covers FIVE elements:

ONE **Masterplan Principles**

These cover the overriding concept for the IAMP, which sets out what it should be like and how it should evolve and the broad themes that have informed its development;

TWO **Interface Principles**

These relate to how the IAMP corresponds with and interacts with its immediate surroundings and setting;

THREE **Street Typology Principles**

These cover the different street typologies that are being developed within the IAMP, how they will be designed and their nature and quality;

FOUR **Plot Design Principles**

These relate to how development corresponds with and interacts with its immediate surroundings and relate to streets and spaces within the IAMP through the location of access points, service areas and parking;

FIVE **Building Design Principles**

These consider the components of the individual buildings, including their design and materials palette, layout and orientation.

Taken together, these principles will combine to deliver the aspiration and vision for IAMP, and help to shape a well-functioning, attractive and commercially viable environment.

Relationship of IAMP ONE with IAMP TWO

* See Section 1.2 Page 18

Relationship to the AAP

Photograph - Nic Lehoux, www.archdaily.com/tag/olympia

Relationship with AAP

The Design Code has been set out in response to the Area Action Plan, to ensure the comprehensive development of IAMP and to meet the principles outlined within the AAP for high quality development that responds to the needs of occupiers, creates a unique environment and protects and enhances the biodiversity of the River Don corridor.

This Design Code covers the whole of IAMP, and sets out the design guidelines, parameters and requirements that need to be met by all development taking place within IAMP.

Relationship between IAMP ONE and IAMP TWO

Early proposals are being brought forward for IAMP ONE, which will form the first phase of the IAMP development to the east of the A1290.

The plan on the facing page highlights the extent of IAMP ONE and its relationship with the remainder of IAMP - IAMP TWO.

Infrastructure

Photograph - goodsgn.com/gardens

Movement

Photograph - www.externalworksindex.co.uk

Buildings

Photograph - Dan Schultz, http://www.adelaidenow.com.au/business/

AAP Policy D1 - Design Code response

Policy D1 Masterplan Design

Policy D1 articulates the key design objectives that need to be met in order to achieve comprehensive development of appropriate quality that will create a unique, high quality destination.

The Design Code set out how this will be achieved at a number of scales:

Section ONE

Responding to the overarching objectives and setting out **Masterplan Principles**;

Section TWO

Addressing the **Interface** between IAMP and the surrounding boundaries;

Section THREE

Setting out the **hierarchy of roads** within IAMP that will meet the needs of all users and ensure effective movement;

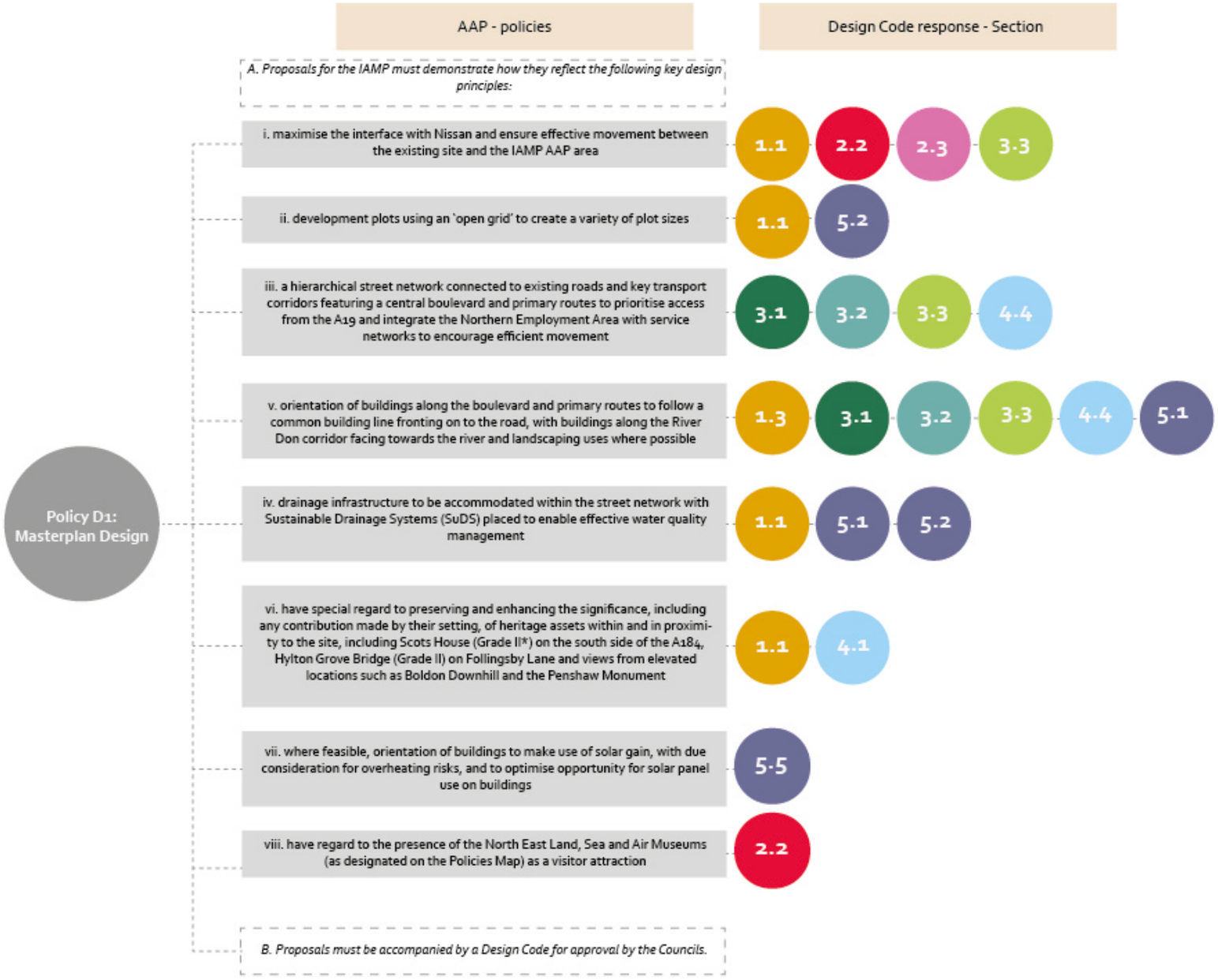
Section FOUR

Outlining a range of **Plot** based Codes that will set out how individual plots will be organised and relate to the wider development;

Section FIVE

At the most detailed scale a series of **Building** Codes that will set out design expectations and requirements.

Taken together, the sections combine to address the criteria set out in Policy D1.



AAP Policies D2 and EN1 - Design Code response

Policy D2 Public Realm and EN1 Landscape

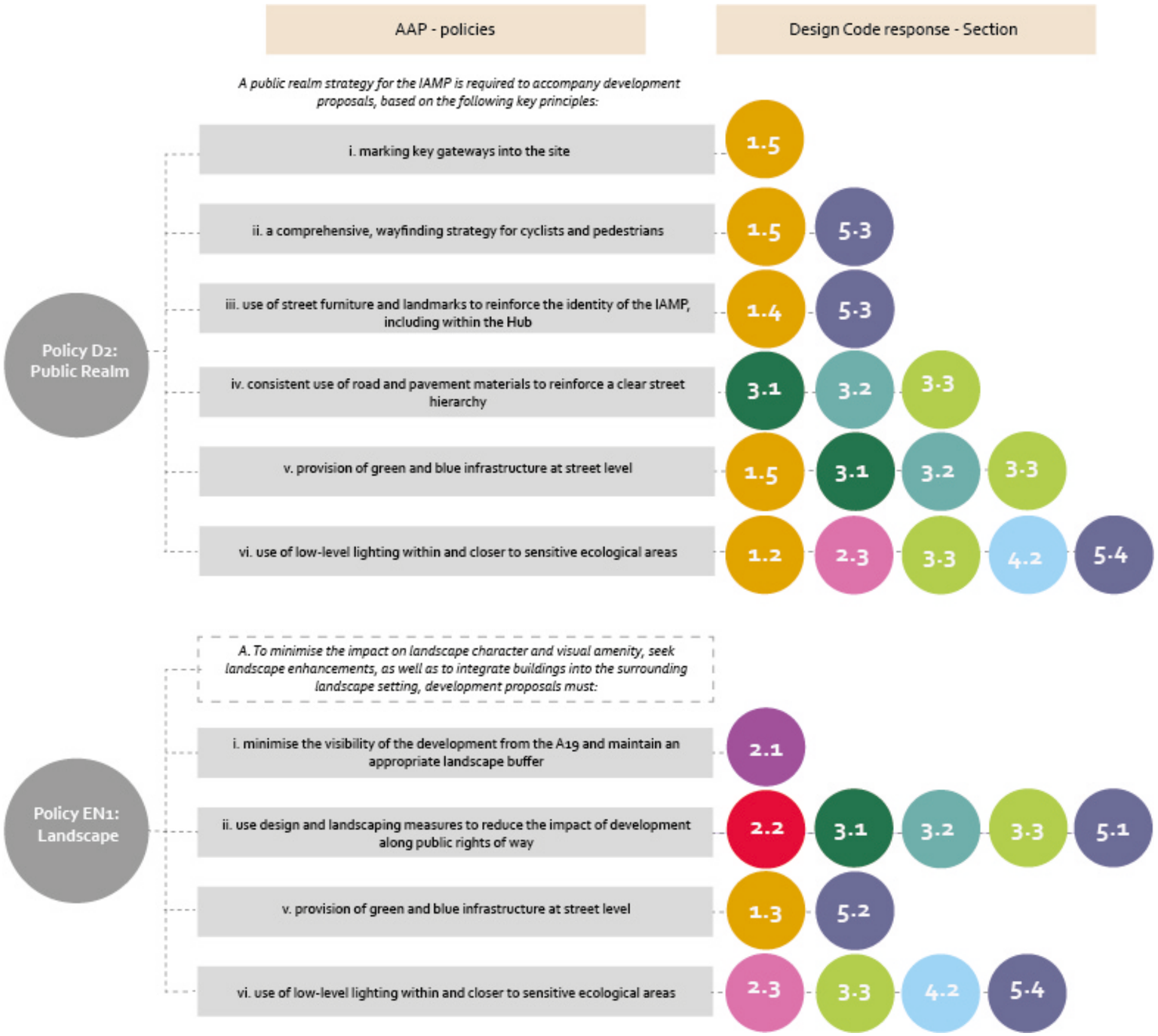
Policy D2 outlines a series of policies aimed at creating a sense of place and ensuring that IAMP has a strong, positive and unique identity.

This policy covers a number of areas within the Design Code: from overarching Design Principles in Section ONE; road typologies to produce a coherent approach to highways as well as green and blue infrastructure in Section THREE; through to an approach to lighting and signage in Sections FOUR and FIVE.

Policy EN1 seeks to ensure that IAMP has a limited impact on its environment, through the incorporation of a strong landscape framework that provides a strong setting for buildings within it.

The relationship of IAMP to the A19 and surrounding public rights of way is dealt with in Section TWO and Section THREE, which sets out a range of different street typologies.

Finally, lighting levels along the River Don corridor are dealt with in both Section FOUR, dealing with Plot lighting, and Section FIVE that covers lighting on buildings.



AAP Policies EN2, EN3 and EN4 - Design Code response

Policy EN2 Ecology, EN3 Green Infrastructure and EN4 Amenity

Policy EN2 sets out the measures required to protect and enhance biodiversity.

A critical element is retaining the River Don corridor as a functional wildlife habitat, and a number of Sections of the Design Code relate to this, both in the measures taking place within the ELMA, to achieving appropriate lighting levels along it.

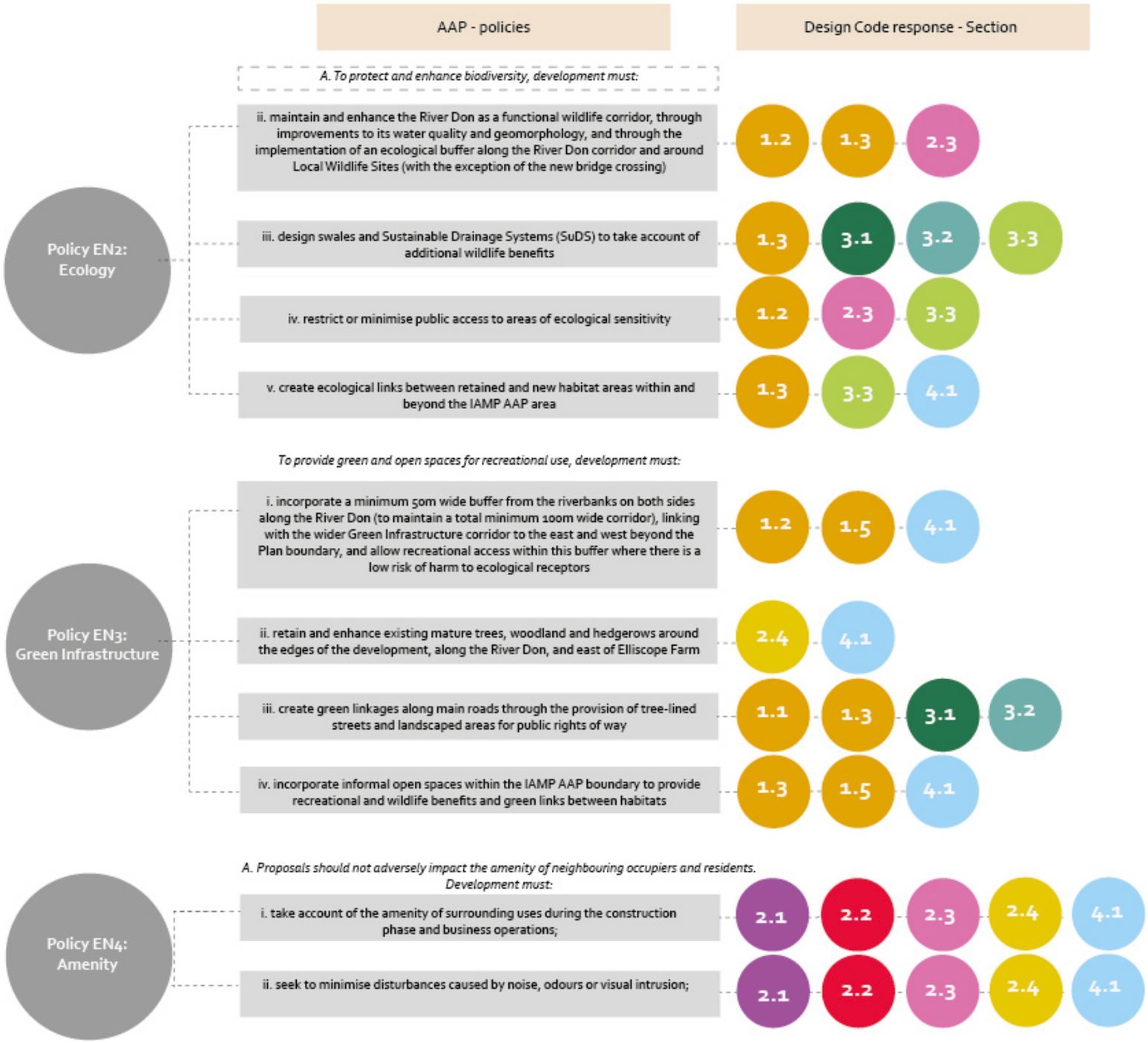
Swales and SUDS will form an important part of the highways design throughout IAMP, and this is set out in the roads hierarchy in Section THREE.

Policy EN3 seeks to ensure green and open spaces are for recreational use.

The Design Code sets out how this will be achieved in a number of ways: through the approach to Green Infrastructure; the approach to landscape across IAMP as well as the design of individual plots through their frontages and detailed design.

Policy EN4 requires IAMP to not impact upon the amenity of surrounding uses, occupiers and residents.

Section TWO of the Design Code contains requirements for the individual boundaries of IAMP and how it interfaces within its surroundings: adjacent manufacturing in the case of Nissan; residential in terms of the A19; and environmental in relation to the ELMA and boundary looking north to the A184.



AAP Policies S1 and S2 - Design Code response

Policy S1 Spatial Strategy and Policy S2 Land Uses

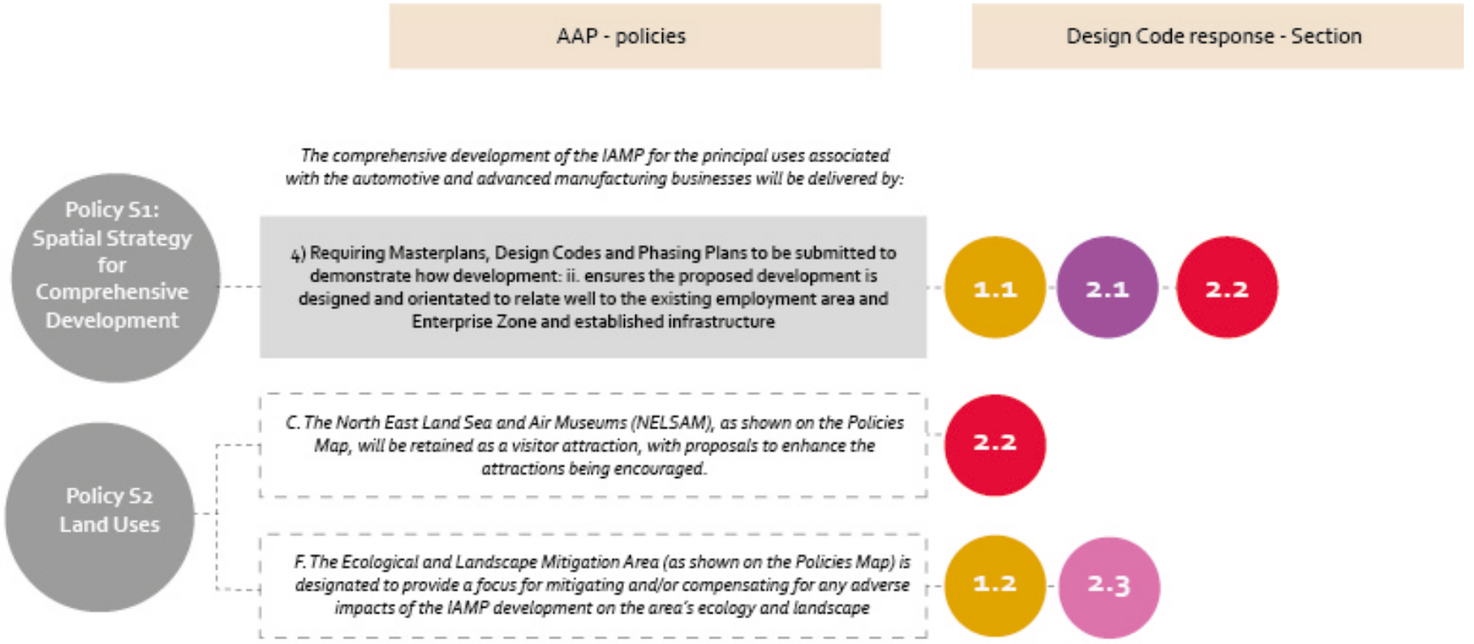
Policy S1 sets out the requirement for the production of a Design Code as part of the means to ensure that development achieves a world class facility that meets user needs and requirements, achieves the necessary environmental mitigation measures and provides a unique destination through the achievement of high standards of design, place making and layout.

While the Design Code in total combines to achieve this requirement, it is most particularly expressed in the requirements set out under the page relating to the delivery of a 21st Century Manufacturing Park.

A particular element highlighted within Policy S1 relates to ensuring that the development is well related to existing infrastructure, and this is set out in Chapter TWO that relates to the Interfaces of the development to its existing context, and in particular the relationship with Nissan along Washington Road in Section 2.1.

Policy S2 refers to the range of land uses that are appropriate within IAMP, as well as those that are not permitted, such as residential uses.

Two elements of Policy S2 are covered within the Design Code: the retention of the North East Land, Sea and Air Museums (NELSAM) located on Washington Road, and the designation of the Ecological Landscape and Mitigation Area (ELMA) to take account of any adverse ecological impacts of IAMP.

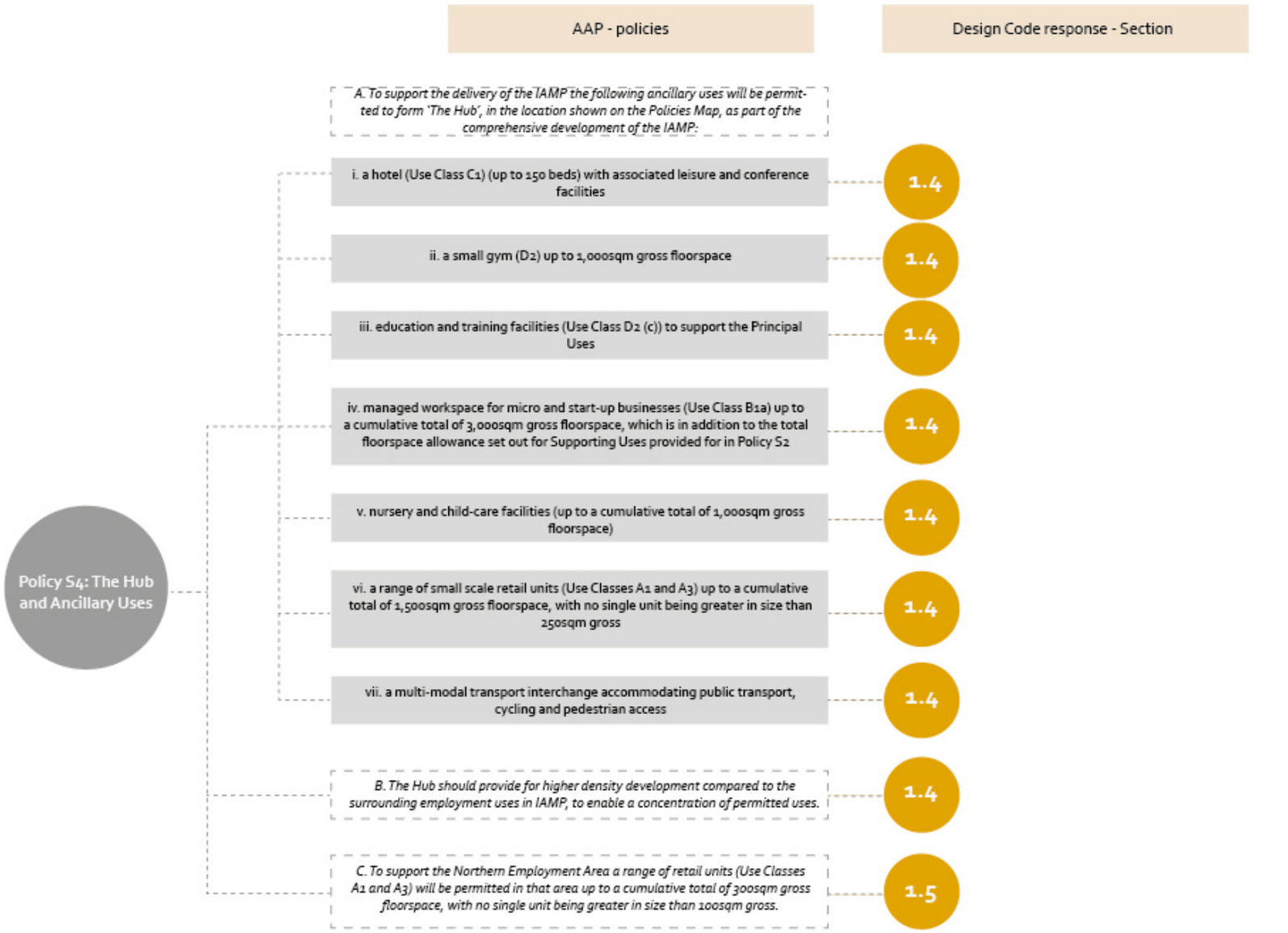


AAP Policy S4 - Design Code response

Policy S4 The Hub ancillary Uses

Policy S4 sets out the range of uses that can be accommodated within the HUB and other designated parts of IAMP.

This is a crucial part of the objective of creating a unique destination that more closely resembles an Innovation District; offering a range of services and facilities outside the individual plots that will help make IAMP an attractive place to do business and in which to work.



AAP Policies T1 and T2 - Design Code response

Policy T1 Highway Infrastructure and Policy T2 Walking, Cycling and Horse Riding

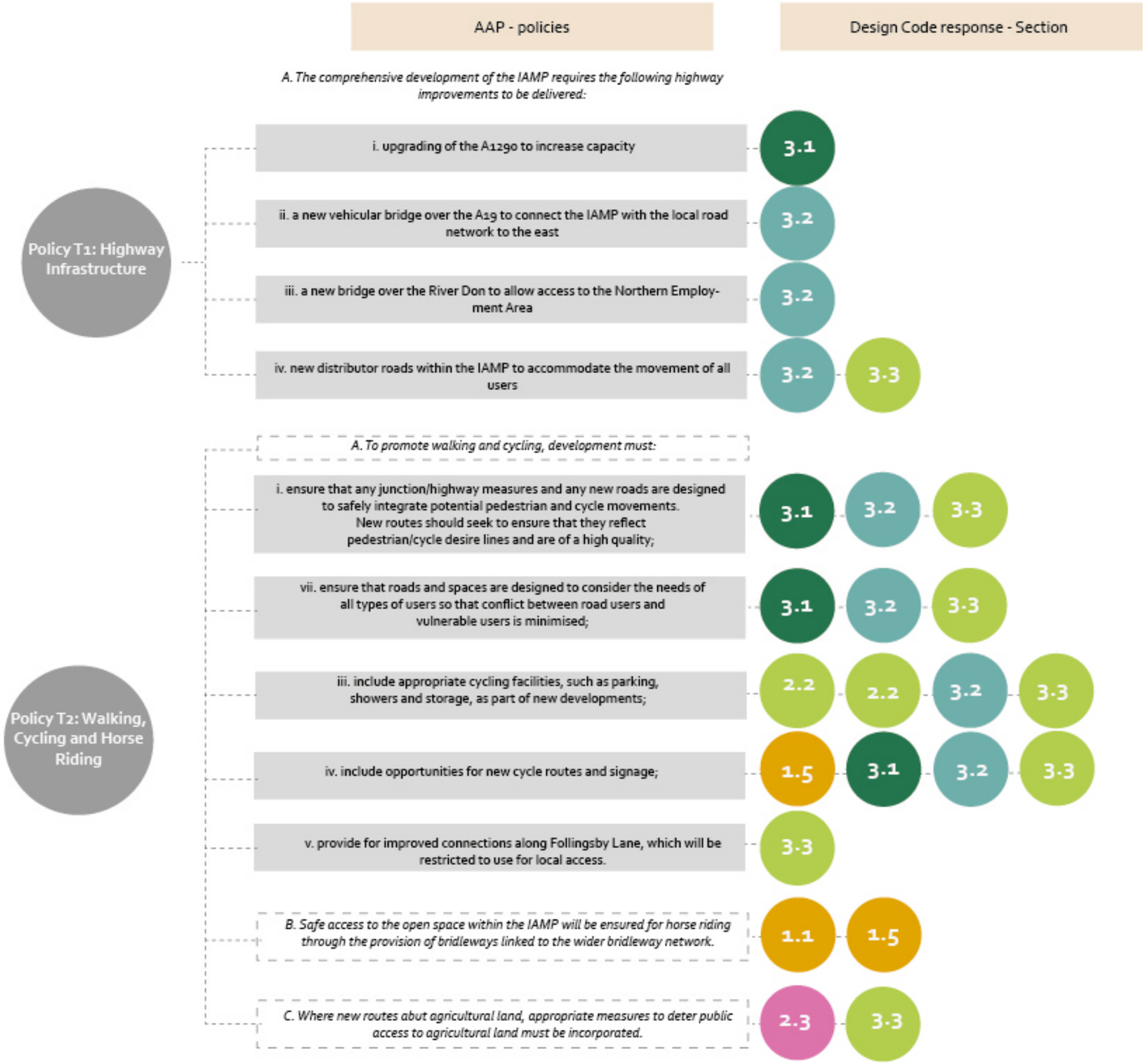
Policy T1 sets out the highways works that will be delivered as part of IAMP, which forms a crucial element in ensuring that IAMP is developed in a comprehensive manner.

Some of the parameters for this work are contained within the Design Code: in particular the hierarchy of streets that will be introduced, each with its own different characteristics.

Each road type - the A1290 (Boulevard), Primary Routes and Green Routes - has sought to accommodate a range of different users.

Policy T2 addresses the needs of different users across IAMP, linking to the surrounding street and footpath network.

The Design Code Section 3.3 seeks to establish ways to control access to agricultural land and the ELMA to protect sensitive habitats.



AAP Policies T3 and T4 - Design Code response

Policy T3 Public Transport and Policy T4 Parking

Policy T3 sets out the range of uses that can be accommodated within the HUB and other designated parts of IAMP.

This is a crucial part of the objective of creating a unique destination that more closely resembles an Innovation District; offering a range of services and facilities outside the individual plots that will help make IAMP an attractive place to do business and in which to work.

Indicative IAMP Masterplan

* See Section 1.2 Page 18

ONE Masterplan Principles

IAMP seeks to create a nationally significant, world class centre for automative and other advanced manufacturing, engineering and related businesses that will attract leading technologies and industries to locate within it.

A number of overarching principles inform the development of IAMP, which are set out here in Section ONE.

A 21st Century Advanced Manufacturing Park

The intention is for IAMP to be a different type of Advanced Manufacturing Park, more akin to an Innovation District: a place where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators and accelerators with a view to creating a successful environment that will also make a great place to work. (*Brookings Institute* 2014)

The ingredients for this environment rest in re-imagining a standard industrial estate to create a place where workers and visitors want to be, and to provide the facilities, quality spaces and routes that will enable workers and visitors to interact and socialise with one another.

This involves introducing a mixed use local centre (the Hub) where people can meet, as well as creating a strong, clear layout and street hierarchy that offers a range of different possibilities for occupiers.

Landscape will also be a strong element within the proposals, running through the IAMP to create a clear unifying feature.

The Ecological and Landscape Mitigation Area

The Ecological Mitigation Area (ELMA) running through the site along the River Don corridor forms a key part of the IAMP.

The ELMA will be designed to encourage and attract a range of wildlife and bird life; introducing a variety of habitats that will accommodate a range of species.

Green and Blue Infrastructure

This version of an Innovation District will have a network of green cycle routes and footpaths connecting the site together, with buildings linked by green spaces that can provide both a positive outlook and connection with nature, as well as offering a place to stretch the legs or have a sandwich on a nice day.

A comprehensive drainage strategy will manage water across IAMP, incorporating a series of larger ponds within a central green space, together with a network of SUDS and swales along the roads.

The Hub

AAP Policy S4 sets out the different uses that may be found in the Hub, and the Design Code will set out how these uses will interact with one another to create a strong destination that will serve both IAMP and Nissan.

Located to take account of the existing Nissan site and the existing facilities, the Hub will offer an attractive, convivial environment that will help IAMP to become a place where people are happy and comfortable spending time in. The range of facilities - which could include a nursery or creche facilities, a hotel, meeting/workshop space and teaching facilities linked to IAMP - will offer workers and visitors a destination with a positive and complementary range of uses that they can benefit from, as well as somewhere to meet, socialise, have lunch or a coffee.

Given the scale and size of IAMP there is also the potential to provide a smaller, complementary facility to the north of the River Don.

Visitor Experience

The IAMP should be an attractive, obvious and legible environment. Visitors - from delivery drivers to executives - should be able to not only understand their way around the IAMP and find where they need to go, but also appreciate it as a unique and distinctive place.

For IAMP to become a successful and unique manufacturing park, it should provide adequate well designed, attractive recreational space.

There should be opportunities for formal and ad hoc recreation in well located positions that both respond to where people want to be and offer good opportunities for surveillance and overlooking.

Photograph - Thomas Marufke, www.fotocommunity.de

http://www.groenblauwenetwerken.nl/measures/

1.1 A 21st Century Manufacturing Park

The aspiration is for IAMP to become a world class Advanced Manufacturing Park, attracting leading industries and a skilled workforce to the UK and to this part of the North East.

To achieve this it is important to provide the type of environment that will be attractive to businesses, both due to its strategic location but also its wider environmental attributes, which will be invaluable in attracting and retaining employees.

Taking inspiration from the concept of Innovation Districts, the IAMP as a whole should be an inviting and stimulating location, an environment that helps to bring people together and encourages interaction between staff and workers from different businesses, helping to forge a distinctive community.

Critical to this is providing a coherent, safe and attractive network that will allow pedestrians and cyclists easy, logical movement through and around the IAMP, encouraging people to walk and interact, increasing the possibility that they will share ideas for mutual benefit.

It will also be important to ensure that there are facilities within easy walking distance that can serve the working population; from practical elements such as a creche, nursery or meeting workspace to a place to buy a sandwich.

Together, these elements will help to make this a unique and different development, helping to bring people together and forge a sense of community and integration.

Photograph - https://inhabitat.com

Photograph - http://www.theguideliverpool.com/

1. Landscape will be a positive feature within the IAMP;
2. A network of green routes provide the potential for lunchtime recreation;
3. Building design will help create a unique environment;
4. Communal uses provide somewhere for workers and visitors to meet;

A 21ST CENTURY MANUFACTURING PARK - CODE

A place that is attractive for business	IAMP should make the most of its strategic location, both adjacent to Nissan and alongside the national road network. Complementary uses and interconnected businesses should be organised alongside one another to develop methods of working, sharing and knowledge transfer that will make this an excellent destination to do business.
A Place for people to meet	IAMP should be designed to encourage interaction and share ideas; not simply at the highest level but between businesses at all levels. There should be communal public space within IAMP - within the Hub and along the pedestrian routes - that will attract involvement and use; from ad hoc meetings to more formal gatherings. Plots and buildings should be positioned to encourage activity and to foster a positive relationship with the surrounding streets and spaces.
A great place to work	IAMP should aim to be a top quality working environment, with ample opportunities to enjoy the spaces and facilities provided. There will be communal facilities within the Hub to cater for a range of needs, linked with public spaces and a wider pedestrian and cycle routes that makes it accessible to the whole of IAMP.
A place that works with the environment	IAMP should be aware of its surroundings and the sensitive nature of the river corridor on its doorstep. Opportunities will be taken to protect and preserve this environment, while also drawing elements of this landscape into the heart of the development. The River Don corridor provides an attractive outlook for the IAMP and the buildings along this edge.
A place that is easy to get around	The IAMP should be somewhere that it is easy to get to and to navigate around. There should be a range of different options in relation to getting to and from the IAMP, particularly through sustainable modes of transport, which should be well integrated into the layout. The IAMP should have a strong network of pedestrian and cycle routes that enable movement independent of the road network.

1.2 The Ecological and Landscape Mitigation Area

The Ecological and Landscape Mitigation Area (ELMA) runs along the River Don corridor and the surrounding landscape that forms the edge to the IAMP.

Creating habitats

The ecological and landscape mitigation area requires sensitive and thoughtful protection to ensure that the habitats and ecology are protected and enhanced over the short, medium and long term.

Largely arable land at present, the plan for the ELMA will seek to increase its capacity as a resource for a diverse range of species of insects, wildlife and birds.

Managing public access

Protection of these habitats is equally important, and proposals also need to manage the eastern boundary where it meets the edge of the IAMP, to restrict public access while retaining views across it.

In addition, the nature of the land immediately to the west of the IAMP can form part of the water management strategy, offering the opportunity for the introduction of landscape scraps to create wetland habitats for a range of bird species and wildlife while discouraging foot fall across it.

Lighting

The ecological and landscape mitigation area along the River Don is ecologically sensitive, with a number of Local Wildlife Sites that include a number of protected species, bats as well as wintering and migratory birds.

Lighting levels along this boundary will need to be designed to have a limited impact upon these species, balancing the need to respect safety and operational issues with the need to ensure that species are able to navigate along ecological pathways and that lighting does not prevent an insurmountable barrier.

Lighting will be developed in accordance with the latest Bat Conservation Trust (BCT) guidance, which recommends a range of potential measures to reduce the impact of lighting on habitats and wildlife.

Photograph - www.portseattle.org/Environmental/Water-Wetlands-Wildlife/

Photograph - James Packer

1. Wetland will be created that will provide potential as water vole habitats;
2. Nesting and migratory birds require feeding grounds ;
3. Water voles are present along the River Don corridor;
4. Landscape scrapes will create habitats for birds and invertebrate life;

THE ELMA - CODE

An ecological pathway along the River Don Corridor	The River Don and the landscape either side represents an important corridor for wildlife and birds. All efforts need to be made to ensure that it remains a coherent corridor for birds, mammals and invertebrates that allows movement along it.
Lighting along the ELMA edge	Proposals for lighting should take into account the latest guidance from the Bat Conservation Trust (BCT). Undue light spill should be avoided and mitigated by measures that will direct light downwards, as well as adopting timing controls where appropriate.

1.3 Green and Blue Infrastructure

The approach to green and blue infrastructure should be to use both landscape and water to provide context and a strong sense of place, while also shaping an attractive setting within which IAMP sits.

IAMP sits alongside a unique and environmentally rich river corridor, and the emphasis should be on creating a strong landscape led framework that seeks to protect and enhance this environment while also drawing the surrounding landscape into IAMP.

The management of water is critical and should be done in such a manner that it achieves this while also becoming a positive, attractive resource that helps to create an attractive setting that also, where possible, provides spaces where people can walk or cycle.

An integrated drainage network

Water management is a key aspect of the IAMP development, and there should be an integrated drainage network that manages water throughout IAMP.

Alongside carriageways, swales should act as the point of discharge and perform an important treatment function as well as storing surface water run-off during extreme storm events. The swales should discharge to the large ponds in the amenity area where there is another opportunity to treat the flows and improve the water quality through the use of stilling bays and appropriate planting. The ponds limit surface water flows.

Changes in topography offer opportunities for the introduction of water bodies that are designed to flood; creating habitat areas and flood compensation.

Wildlife corridors and movement

A strong green route should link between the Hub through the central landscape space to connect the various area together.

Follingsby Lane should be retained as a non-motorised vehicle corridor, with appropriate planting.

IAMP also seeks to introduce new areas of landscape into the development that can offer opportunities for activity and recreation.

1. Water can be used as an attractive feature for buildings to cluster around;
2. Swales can be effective features that work when dry as well as wet;
3. New tree planting can provide a focus and offer shade in the summer;
4. Green and blue infrastructure can work in harmony;

Photograph - http://www.win-world-wide.de/page/2/

Photograph - www.monash.edu.au

Photograph - http://www.eco-spaces.co.uk/eco-drainage.html

GREEN AND BLUE INFRASTRUCTURE - CODE

Surface Water Drainage, floodplain storage	Swales should be used as a point of discharge for highways to perform an important treatment function and to store surface water run-off during extreme storm events. The swales should discharge to ponds, limiting the surface water flows back to green-field run-off rates. Subtle changes to the topography of the ELMA should create areas that are intended to flood, creating habitats and areas for flood compensation.
Promoting green infrastructure	Existing hedgerows that form the boundary of individual plots should be retained where possible, with sensitive management to protect the wildlife habitats. Where gaps exist then infill planting of appropriate species plants and shrubs should be undertaken to reconnect fragmented areas of habitat.
Adding planting to enhance the environment	Boundary edges and green spaces should incorporate appropriate native species that can extend the landscape habitat and draw them into the IAMP and help tie the plots together.

1.4 The Hub

The Hub will form a central component of IAMP, providing a unique mix of facilities and attractions that will offer something for workers and visitors - either during a break or at the end of the day.

The range of uses ensures sufficient activity throughout the day and into the early evening, and supports the hotel use that naturally extends into the evening.

Nature and 'feel' of the place

The aspiration is for the Hub to have a distinct look and feel, and be perceived and act as a centre that can provide a range of services and needs.

The public realm within the Hub should seek to reinforce this character and environment and help to 'tie' the development together physically and visually, using a distinctive palette of materials and street furniture.

Linking the Hub to the wider IAMP and Nissan

It is important that the Hub is accessible from the rest of IAMP as well as from Nissan. Pedestrian links and crossing points allow obvious, easy access into and from the Hub.

Potential for recreation

Workers want a variety of things during breaks: somewhere to sit and relax; somewhere to chat to friends and co-workers; a private place to have a conversation; somewhere to do some exercise.

The Hub should cater for these diverse needs through the design and arrangement of the buildings and spaces, and through the design of the spaces themselves.

Photograph - http://www.thetravelmagazine.net

Photograph - Hufton + Crow, www.dezeen.com

1. The Hub should contain an attractive, coherent public realm;
2. The Hub can act as a focal point and help bring people together;
3. A range of facilities can be included, such as a nursery;
4. Communal uses provide somewhere for workers and visitors to meet;

THE HUB - CODE

Setback and arrangement	Buildings within the Hub should combine to shape spaces and have a strong interrelationship with one another. Set backs may be incorporated where this responds to a strong use and activity.
Architecture	Buildings should be arranged and orientated to encourage movement and promote activity by facing primary elevations towards the public realm. There should be a high proportion of active facades when facing public spaces or along important routes leading to and from the Hub.
Materials	There should be a coherent approach to the materials palette that responds to the character and nature of the area and the wider aspirations for the public realm. The Hub should have its own distinctive materials palette, which can act as a unifying surface to link buildings together and shape the spaces. The approach for individual street types outside the Hub is set out in Section THREE. Paving should be hard wearing and durable, and contrasting paving may be used around the building thresholds, or to signify changes in level or spill out spaces.
Parking	Cycle parking to be located in convenient, well-lit areas, with secure covered parking provided for staff. Visitor parking should be located close to visitor/ customer entrances.
Lighting	The lighting should be pedestrian orientated and aim to reinforce the character and identity of the HUB and to make areas feel safe. Lighting should be appropriate to its use and location, with additional lighting - up lighting against buildings, bollard lighting - used as appropriate.

1.5 Visitor Experience

Ensuring a strong and positive visitor experience is an important part of creating an attractive working environment, and in helping to create a unique and inviting location that people want to be in and visit.

A strong and consistent approach to materials, signage and wayfinding is an important means by which IAMP can distinguish itself and fulfill its role as a leading, nationally significant facility.

IAMP signage and wayfinding

Appropriate, coordinated signage is an important means of both reinforcing the unique character of IAMP, but also in making it easy and obvious to get around.

Signage should work at and cater for different requirements: vehicles and deliveries; those using public transport; pedestrians and cyclists.

For those working there, the network of green routes also offer a range of potential choices that should be articulated.

Totem signage also offers the opportunity for interpretation - perhaps explaining the ELMA along the green route and highlighting the different species present - that can add value and understanding to IAMP and the surrounding area.

Street Furniture

The introduction of street furniture such as seating, bins and bollards within the Hub and other public areas can offer scope to help to create a distinctive identity and character for IAMP.

This will help promote the development in its own right, providing the features necessary to make an attractive place but also choosing materials that help to confer a uniqueness to the development.

Street furniture could offer opportunities to incorporate public art, which can be a good way of helping to articulate the history of a place and link the development to its context.

Photograph - www.externalworksindex.co.uk

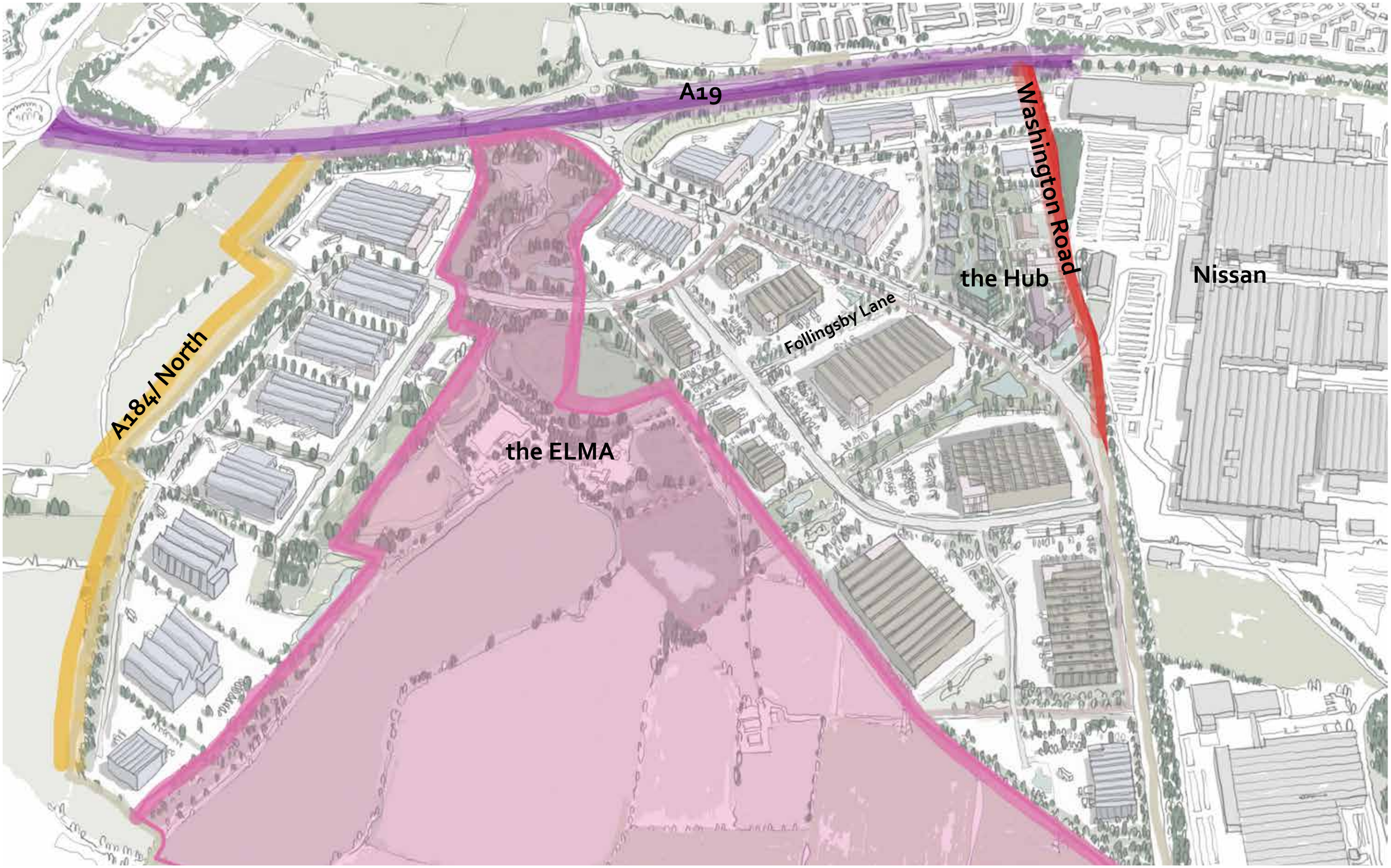
Photograph - http://clasebcn.tumblr.com/

1. Materials used can help to reinforce character;
2. Pedestrian and cycle signage designed to allow people to get close to it;
3. Imaginative wayfinding can help people navigate their way around easily;
4. Seating and other items of street furniture offer the potential for public art.

VISITOR EXPERIENCE - CODE

Signage	Signage should be clear and visible and appropriate for the purpose for which it is intended.
Wayfinding	There should be network of signs and other features that help to delineate routes and aid navigation. This should include entrances into IAMP. Font sizes should be appropriate to the distance at which the information needs to be read.
Street Furniture	Street furniture should be of a consistent type, materiality and design that helps to reinforce the character of the IAMP.
Public art	Public art could be integrated into the fabric of the existing features; incorporated into the other features across the IAMP.
Lighting	A lighting scheme should be adopted that helps to tie the IAMP together.

Interfaces with IAMP



TWO Interface Principles

Section TWO deals with the 'Interfaces' with the IAMP; specifically how it relates to and responds to its immediate surroundings.

External Interfaces

The relationship of IAMP with surrounding land uses and the landscape is of the utmost importance; IAMP does not sit in isolation but has a series of external faces that represent its outward - looking expression.

The scale of IAMP, as well as its location, means that it has a vastly different series of boundaries, representing different and unique challenges in each case.

There are four interfaces:

- **the A19 to the East;**
- **Washington Road;**
- **the countryside edge (ELMA) to the west;**
- **the landscape to the north towards the A184.**

Each of these interfaces has different characteristics and requirements, necessitating different approaches and changes of emphasis to meet particular needs.

Nissan represents the key development lying directly to the south of IAMP. Development along this immediate edge needs to respond to and acknowledge this development and be designed in a way that will create a positive relationship with it. The key objective is to make this an attractive boundary that facilitates a strong interrelationship between IAMP, Nissan and the Hub, positioned in this strategic location.

The **A19** is the key trunk road serving IAMP, and the objective is to provide a positive edge along this route that will be both attractive and welcoming to businesses as well as contributing to reducing noise and light pollution to the residential estate of Town End Farm.

To the west lies the River Don and what will be the **Ecological and Landscape Mitigation Area**. The objective here is to provide an attractive boundary along the western edge of the IAMP that will allow views out and across this landscape while managing access into it to protect fragile and emerging habitats and ecology.

To the north there are views out across countryside to the **A184** and the objective is to reduce the impact of the development within the landscape.

The following pages look at these different interfaces and set out Code requirements for each.

In addition to these boundary interfaces to IAMP, there are also two further interfaces that concern intermediate operations and how these will be addressed.

These are:

The interface between IAMP ONE and the remainder of IAMP;

IAMP ONE will cover the area to the west of the A1290, running along the edge of the ELMA and as far north as the link road that heads to the River Don.

The proposals being put forward for IAMP ONE have been set out in recognition of the fact that this will form part of a wider, comprehensive scheme.

The interface between IAMP and the Highways England proposals for the Downhill Lane junction of the A19;.

IAMP and the improvement scheme at the Downhill Lane junction are intrinsically linked and as such their interface requires careful consideration and management. To this end, extensive liaison has taken place between both parties and dialogue will continue throughout the design and implementation process of both schemes as the final layout is developed.

2.1 The A19 corridor

The A19, which runs immediately to the east of IAMP, forms part of the national major trunk road network.

Highways England is seeking to upgrade the A19, with proposals for both Downhill Lane junction immediately adjacent to IAMP, and Testo's roundabout a few hundred metres further to the north.

While the proximity of the A19 is of obvious benefit in terms of the accessibility to the strategic road network, issues of noise and air pollution need to be taken into account to create the right sort of environment, both for those passing or living adjacent to the IAMP as well as for the workers and visitors within it.

The AAP sets out the requirement to maintain an 'appropriate landscape buffer' to minimise the visibility of the development along the A19, which forms part of the landscape mitigation measures for the IAMP.

Screening IAMP from the A19 and nearby housing

The intention is for this landscape buffer to be mounded to reduce noise and air pollution from traffic as well as forming an appealing edge to the road.

The landscape buffer will incorporate a mix of grass, shrub and tree species that will assist in providing year round screening, mitigating against light and air pollution.

Improved access

An important part of the proposals for IAMP involve improving access between the area and the surrounding neighbourhoods. The Masterplan includes the introduction of a new bridge across the A19 that will provide additional access between IAMP and Town End Farm.

This will also be a crucial means of offering a genuine alternative to Downhill Lane junction, helping to manage vehicle movements.

1. Tree planting can help screen the A19;
2. A strong landscape edge can be an attractive feature;
3. Earth mounding along the A19 will provide a natural buffer ;

THE A19 CORRIDOR - CODE

Set back	There should be an appropriate landscape buffer along the length of the A19, which will be landscaped with low vegetation and tree planting to present a significant screen.
Layout	Buildings should be positioned along the A19, facing west away from the trunk road with the landscape boundary forming a strong edge onto the A19. Blank or rear elevations should not address the east-west route.
Landscaping	The landscape buffer will be earth mounded to increase the effectiveness of this feature as a boundary along the A19. Significant landscaping including evergreen species will provide an attractive edge to this boundary as well as offering both wildlife habitats and noise attenuation.
Materials	Surface materials should be chosen to denote spatial hierarchy, ensuring a safe, attractive and legible environment.

2.2 Washington Road

Washington Road extends along the southern edge of IAMP, linking the pedestrian footbridge that extends across the A19 to the main entrance into Nissan where it meets the A1290.

Due to this position and link with the immediate local community, Washington Road represents an important edge to IAMP.

Although a well used pedestrian and cycle route, Washington Road is somewhat isolated and remote at present, with some casual fly tipping towards its eastern end.

The presence of the entrance to Nissan, as well as the North East Land Sea and Air Museums (NELSAM) and The Three Horseshoes Public House make this an important location, especially so given that the Hub will also be located alongside this route.

Creating a new relationship with Nissan

IAMP will mean that Washington Road performs a different role, particularly given its position adjacent to Nissan, its connectivity to surrounding areas and the presence of existing facilities along it.

For the majority of its length Washington Road is used predominantly as a pedestrian and cycle route, and this should continue, providing a strong sustainable transport link across the A19 into the IAMP site. A new access road will be introduced from the north that will create a new junction onto Washington Road, with traffic crossing it to meet a new entrance into Nissan.

New buildings will seek to create a positive relationship with this pedestrian and cycle route, offering a strong degree of natural surveillance and overlooking. This will include a minimal set back for buildings so that the route does not feel remote and there is a positive interrelationship with the street.

Lighting will seek to reinforce pedestrian activity along Washington Road.

1 Creating a strong threshold along the street;

2 Soft landscape margins along the road;

3 Attractive lighting in a variety of sources;

Photograph - Denmarsh Photography Inc., http://www.ecobuildingpulse.com/

Montgomery County Planning Commission

Photograph - http://www.londontown.com/LondonEvents/Here-East-Canalside-Launch/99da8/

WASHINGTON ROAD - CODE

Set back	Buildings should have a positive relationship with Washington Road. Depending on the size of building, there will be between a 5-10m setback to retain a sense of connection and natural surveillance.
Architecture	Office elements of buildings should have no less than 60% active facades - denoted as either windows or entrances - that can offer surveillance onto Washington Road.
Landscape	Landscape and tree planting should be provided where necessary as a natural buffer from key view points.
Materials	Materials should be used to denote the use and activity along Washington Road, which will be used by pedestrians and cyclists. The unit size of materials palette should reflect this, with clay block paving along pedestrian routes and a bound surface used to denote the cycle route.
Lighting	Pedestrian/cycleways, roads and parking areas should be well-lit, at a minimum of 7.5 lux, subject to detailed consideration. Screens and blinds should be introduced where necessary to minimise light spill and pollution. A range of lighting sources should be considered in addition to street lighting, such as building lighting and bollards, to create an attractive environment.
Road junction	The new road junction should have a minimum of street clutter. Pedestrian and cycle movement along Washington Road should remain, with safe, obvious crossing points.

2.3 The ELMA

The interface with the surrounding landscape is an essential component of IAMP, forming a key element of the unique setting of the development.

At present, the area that will form the Ecological and Landscape Mitigation Area (ELMA) is predominantly farmland, together with intermittent hedgerows, and is home to a multitude of bird species and other wildlife that depend on it for both its capacity as a habitat and food source.

The proposals for IAMP should include mitigation measures that will extend and expand upon the capacity of this area to hold a significant number of species, making it a valuable environment.

Creating an appropriate interface

The interface with the ELMA is important in a number of ways: its success depends upon its ability to support a range of species, without excessive interference from human activity.

The boundary along the edge of the IAMP is therefore a critical element: allowing a visual connection with the landscape while restricting and controlling access into and across it.

Access into the ELMA needs to be managed to ensure that it has the maximum opportunity to flourish without undue external harm. It is also important that this countryside becomes a positive feature and backdrop to the IAMP, so that these essential qualities of 'place' are celebrated. Public routes should not encroach across areas proposed for nesting birds, and should remain close to the green street running along the edge of IAMP.

Pedestrian access should form part of a connected route that connects both to the HUB and to Follingsby Lane, thereby providing a link to the existing long distance footpath network and also access through to Elliscope Farm.

Ensuring the lighting is sensitively handled

Maintaining low lighting levels onto the ELMA is essential to minimise disruption to wildlife. A variety of mechanisms can be used, such as uplighting of buildings, low level bollard lighting and soffit lighting to supplement any lighting along the green route.

Timed controls may also be appropriate: reducing overall lighting levels during the nighttime to correspond with natural day/night patterns.

http://oxyir.us/ha-ha-landscape/

Photograph - www.breedlovelandplanning.wordpress.com/category/sustainability/page/9/

1. Landscaping can provide an appropriate setting;
2. Changes of level can be effective;
3. Mixed species hedgerows provide an effective boundary;
4. A SUDS channel can act as an effective barrier;

THE ECOLOGICAL AND LANDSCAPE MITIGATION AREA - CODE

Set-Backs	Buildings should be set back a minimum of 10 metres, to facilitate a strong, clear and pleasant pedestrian environment and a clear interrelationship between the buildings and the adjacent green route.
Orientation and aspect	Buildings should be orientated to ensure that there is minimal light spill out towards the ELMA. Where practical the elevation facing towards the ELMA should be as active as possible.
Landscape and boundary treatment	There should be a robust landscape edge along the edge of the ELMA, which should act as a deterrent to casual movement across or through it. Species such as Blackthorn or Hawthorn could be used to provide a strong barrier while retaining an attractive edge to the development. Landscape treatments should soften the interface between the buildings and the ecological corridor and assist in providing an unobstructed visual connection with the landscape. Sustainable landscape design should be integrated within the streetscape where possible, such as the incorporation of sustainable drainage (SUDS) - subject to detailed design consideration.
Materials	Delineated pedestrian and cycle zone along the green route. Considered use of materials in relation to pedestrian and cycle use.
Cycle Parking	Integrate cycle parking in well-overlooked and well-lit areas.

2.4 North towards the A184

The northern interface for the IAMP sits against farmland and countryside that extends further north before it meets Newcastle Road (A184), which links between Testo's roundabout and Gateshead to the west.

The A184 is separated from the IAMP by agricultural land, although there are currently views south across the countryside from this busy road.

The land rises slightly from the A184 before dropping away, meaning that there are not extensive views across the entire site.

The IAMP proposes a cluster of development in the northern part of the site, and this should be arranged and oriented so that any service areas are not alongside this corridor. This will help to ensure that light levels can be minimised.

Screening the IAMP from long views

A landscape strip is proposed to run along the northernmost boundary of the site, which will act as a screen for the majority of the development from the A184.

This strip should be deep enough to provide an effective visual buffer of the development from the north, allowing trees and shrubs to develop into a dense screen that can act as both a wildlife habitat and become a shelter belt in future years when it becomes more mature.

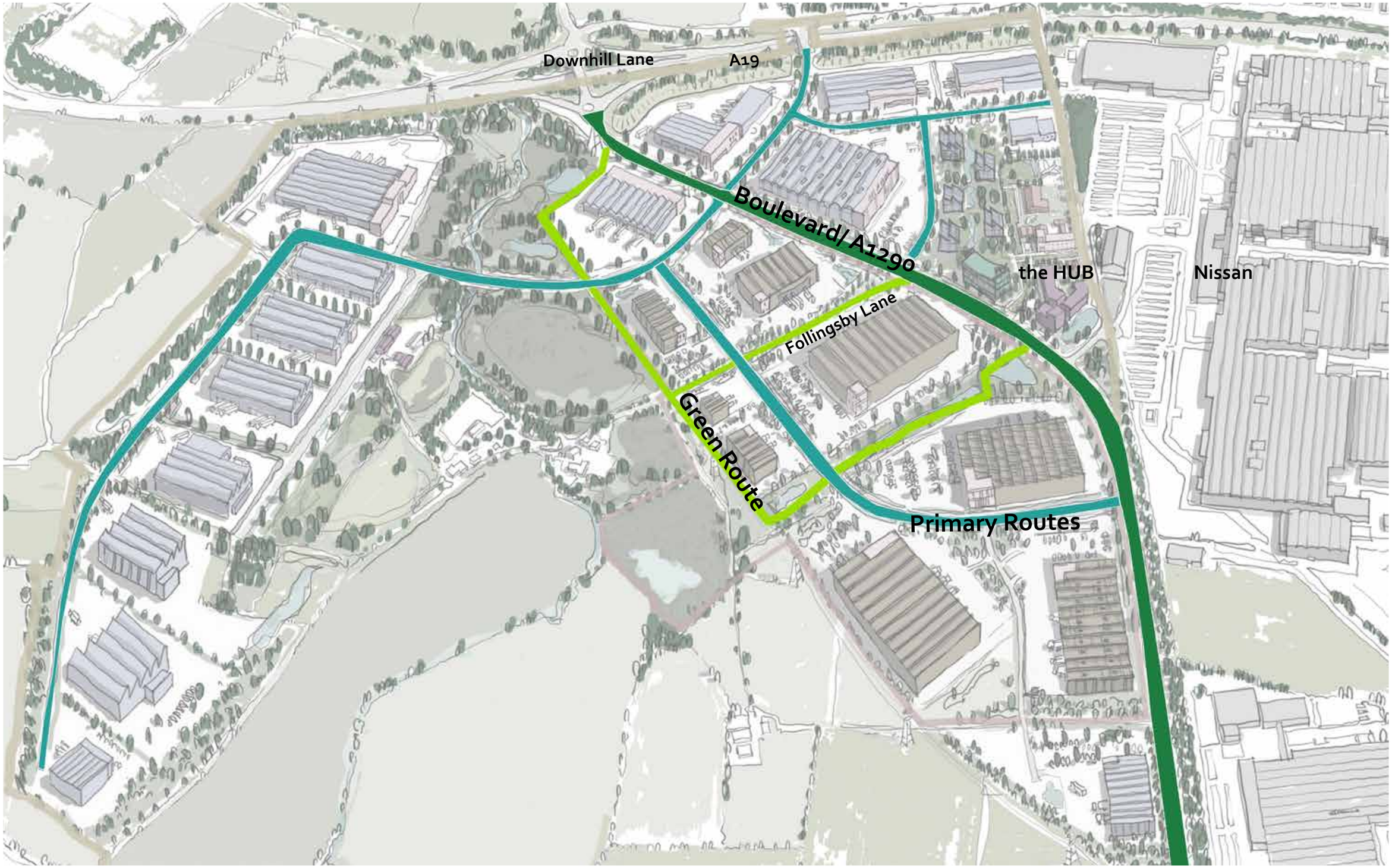
Lighting to the rear of the plots along the northern boundary should be carefully considered to ensure that it is appropriate and functional while not contributing to any unnecessary light pollution.

1. Working with the landscape and topography is important;
2. A depth of landscape buffer provides an effective screen;
3. Retained hedgerows provide screening and wildlife corridors;

THE A184 - CODE

Set back	Buildings should be set away to enable a strong landscape buffer to be introduced along the northern boundary.
Landscape	A landscape strip should be introduced along the northern boundary, to provide a visual screen of IAMP when viewed from the farmland and landscape to the north and from the A184. Plots' fences should not be higher than 2.8 metres, and set behind a landscape screen to reduce their prominence and impact. Sustainable landscape design should be considered and integrated within the streetscape where possible, such as the incorporation of sustainable drainage (SUDS) - subject to detailed design consideration.

the road hierarchy across IAMP



THREE Road Typology Principles

Section THREE sets out the distinctive road hierarchy for IAMP, which will help address a number of Masterplan objectives: the need to **Improve access and connectivity** into and around IAMP for different modes of transport; and **Movement logistics** that seeks to ensure efficient movement for suppliers around IAMP.

The AAP also required proposals to demonstrate a hierarchical street network *'featuring a central boulevard, primary routes and service networks'.*

The introduction of a road hierarchy is one of the key aspects necessary in delivering a distinctive type of development for the IAMP that moves away from a traditional reliance on cul-de-sac and a 'everywhere is the same' type road network.

Road typologies

Within the development IAMP proposes a road hierarchy that will offer a specific character, quality and purpose for each type of road.

The largest road - the strategic **Boulevard** - follows the route of the existing A1290 and provides the main arterial route running through the IAMP. This road will remain as a single carriageway road during IAMP ONE, but will ultimately become a dual carriageway as development of the remainder of IAMP progresses.

The boulevard will act as the shop window for IAMP as it is the key interface with the surrounding area as vehicles use the route to travel between the A19 and Washington and other locations to the west.

There will be a series of **primary routes** running through IAMP, which will serve the plots and forms the key local road network serving the development.

In addition, there will also be **'green routes'** that will be predominantly vehicle free and for use by pedestrians and cyclists permeating through the development. The lower part of Follingsby Lane will be closed to motorised vehicle traffic to enable it to become part of the wider pedestrian and cycle network around IAMP.

Each of these road types will be dealt with in more detail in the following pages.


Boulevard


Primary Routes


Green Routes

3.1 The Boulevard (A1290)

The A1290 links the nearby settlement of Washington in the west, running past the entrance to Nissan before running diagonally north east to join with the Downhill junction on the A19.

While the Boulevard will continue to be the principal means of access into Nissan, as well as an important local connection, it will also form the key spine of IAMP, becoming the main public road running through the heart of the Manufacturing Park.

As such, it is important that the Boulevard should create a strong positive first impression as it will be the first element of the IAMP that will be experienced.

Greening the street

The Boulevard will ultimately be widened to become a dual carriageway as IAMP develops.

SUDS and swales could be incorporated along either side, providing an attractive green feature that also offers a practical, visible drainage approach.

Sustainable transport options

There will be space created for cyclists and pedestrians, running in both directions either side of the street, to allow excellent connectivity through IAMP.

Public transport is also a key consideration, and sufficient space needs to be introduced along the A1290 to accommodate bus stops along the route.

Ensuring an appropriate boundary treatment

The buildings arranged along either side of the Boulevard need to offer a strong, clear and attractive image of the IAMP.

The design of the boundaries is of critical importance in ensuring that this is an attractive environment that articulates a strong image for IAMP as a whole.

Formal boundary treatment should be set back behind a landscape screen that will soften this boundary.

http://www.groenblauwenetwerken.nl/measures/

1. Trees and wild flower ground cover create an attractive environment;
2. Open swales along the roadside;
3. SUDS can look good in both wet and dry conditions;

THE BOULEVARD - CODE

Set back	Buildings will be set back from the Boulevard in accordance with the requirements to maintain a distance from overhead power utilities.
Landscape	Trees and planting should be used along both sides of the road where appropriate to provide a positive, attractive environment as the 'first experience' of IAMP. Plots' fences should not be higher than 2.8 metres, which should be set behind a landscape strip that will help screen the boundary. Where appropriate, open drainage swales (SUDS) should be created either side of the highway. The swales should have shallow bank profiles (no steeper than 1 in 3) to facilitate the establishment of marginal planting.
Lighting	Lighting should be incorporated between the pedestrian/ cycle path and the carriageway, ensuring both are well-lit, subject to detailed consideration. The boulevard should benefit from a strong lighting strategy, but one that is conscious of the wider environmental impact of light pollution.

3.2 Primary Routes

The primary routes provide the points of access into the key local network for the development within IAMP. The routes also include the new bridge that spans the A19, which will form a key point of arrival into IAMP.

Ensuring an appropriate sense of arrival

The primary routes form the key address for the buildings along it, and are consequently where the main first impressions of the IAMP will be formed.

It is essential, therefore, that these streets are attractive as well as functional.

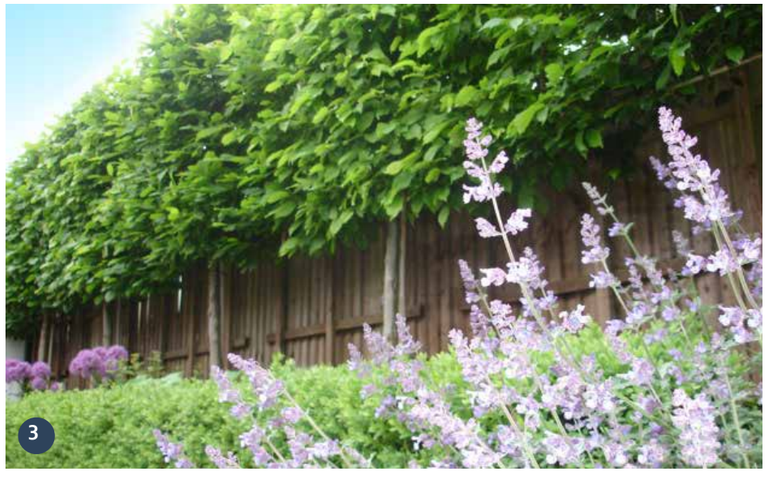
Signage and way-finding

Signage will be of particular importance, achieving a balance between achieving the necessary objective of being visible and assisting in way-finding while at the same time projecting an attractive, unified image for the IAMP.

Standardised totems will help to unify the IAMP and assist in it being 'read' as a single development along the roadside.

Landscape treatment

There should be a strong, coherent planted edge along either side of the primary routes, helping to reinforce the landscape setting of the development as well as helping to screen any boundary fencing, which should be set back behind it.



1. Tree planting can provide a soft boundary to the street ;
2. Swales can provide a range of different habitats;
3. Boundary treatment can work at a number of levels;

PRIMARY ROUTES - CODE

Setback	Buildings will be set back from the primary routes by between 10-15m.
Boundary treatment	Boundary treatment such as fencing should be colour coated and no greater than 2.8m high. Boundary fencing should be set back behind a landscape buffer that will provide a screen to the fencing.
Landscape	A landscape strip comprising evergreen and deciduous trees and shrubs should form an attractive edge to the development and help screen any fencing. Species choice should be informed by the landscape survey, to help tie the development into its context. Sustainable landscape design should be considered and integrated within the streetscape where possible, such as the incorporation of sustainable drainage (SUDS) - subject to detailed design consideration.
Lighting	Lighting should be incorporated between the pedestrian/cycle path and the carriageway, ensuring both are well-lit. A consistent and comprehensive lighting scheme should tie primary routes together.

3.3 Green Routes

As well as the vehicle network running through the IAMP, green routes provide a pedestrian/cycle movement network, allowing and facilitating the short local journeys that workers and to an extent visitors will take on a daily basis.

Green routes will be free of motorised vehicles, and offer scope for walking, cycle movement and horse riding; providing connections to and from the Hub and around IAMP.

A different materiality

While a clear route, they should be clearly and obviously pedestrian and cycling orientated, with an intimate scale appropriate to the needs of these users.

The green routes should encourage pedestrians and cyclists, utilising a single surface wide enough to prevent obstructions and undue conflict.

Lighting

Any lighting should respond to the needs of pedestrians and cyclists, while also acknowledging the position of the ecological corridor.

1. The Green Routes should be an attractive recreational route;
2. Landscaped edges can also act as sustainable drainage;
3. Lighting, where appropriate should be well directed and not spill onto the ELMA;

GREEN ROUTES - CODE

Setback	Buildings will be set back from the green routes by between 5-15m, depending on the layout of individual plots.
Architecture	Buildings should acknowledge the green routes where possible.
Boundary treatment	Boundary treatment such as fencing should be colour coated and no greater than 2.8m high. Boundary fencing should be set back behind a landscape buffer that will provide an attractive screen.
Landscape	A landscape strip should form an attractive edge to the development and help screen any fencing. Species choice should be informed by the landscape survey, to help tie the development into its context.
Materials	Surface materials should be chosen to denote the spatial hierarchy, ensuring a safe, attractive and legible environment. A single unifying surface could be used, without demarcation between cyclists and pedestrians to encourage greater interaction and avoiding unnecessary compartmentalisation of the space.
Lighting	Where appropriate, lighting should be incorporated along the pedestrian/cycle path. Bollard lighting could also be used to provide additional lighting to highlight elements: business entrances; junctions; signage and seating areas.

Plot elements within the Design Code

- 4.1 Landscape (p36)
- 4.2 Lighting (p37)
- 4.3 Parking (p38)
- 4.4 Servicing (p39)

FOUR Plot design Principles

Photograph - Place Design + Planning, www.landezine.com

Section FOUR of the Design Code deals with the level of the plot, outlining the different components that need to be addressed by individual occupiers within the IAMP.

It will be essential that each occupier contributes towards the wider aspirations of the IAMP principles, set out in the preceding section, and helps to reinforce this character and qualities.

The Plot elements are set out as follows:

Landscape

The landscape treatment for each plot should take its cues from the overarching landscape approach being put forward for the IAMP as a whole, while addressing specific circumstances.

Certain plots within the IAMP, such as corner plots, or those with a significant visual impact, will be required to demonstrate their contribution to landscaping that will respond to the particular location.

This may take the form of continuing a tree belt along the frontage, to more ornamental planting at junctions.

While the IAMP is composed of a series of individual units, the aspiration is that the approach to landscape will seek to minimise the impact of boundaries where possible.

Although security and safety are of the utmost importance, the introduction of endless expanses of palisade fencing tends to offer a 'fortress-like' feel. Landscape elements - planting, swales and dykes, level changes - will be utilised to help soften these boundaries with fencing set behind.

Lighting

The approach to lighting is important throughout the IAMP, and this extends to the plot level.

Lighting needs to highlight a number of areas within the plot: the visitor entrance and forecourt of the building; the main access point from the main road; the staff spill out space; service and delivery areas.

Different lighting solutions should be adopted to match the requirements and circumstances in each case, but in all instances efforts should be made to ensure that lighting does not cause undue light pollution and spill to areas where it is not needed.

Parking

Individual businesses will have different parking requirements, depending on the nature of the business and the number of staff they have and the number of visitors they might reasonably expect.

Proposals need to ensure that car parking is in the most appropriate location, and is safe and convenient to use. There should be EV charging points and bays in logical, obvious locations.

Cycle parking should be encouraged and proposals need to set out safe and secure locations where cycle parking will be positioned.

Servicing and deliveries

Each plot within the IAMP will need to accommodate servicing and deliveries, probably on a frequent basis, and for a number of the businesses that will be located within the IAMP there may well be a significant amount of activity throughout the day in relation to goods coming in and/or going out.

This movement, which may include both small service vehicles but also larger HGV's, will need to be factored in to the design of each plot.

Where practical visitor and staff parking should be kept separate from the movement of much larger vehicles, to avoid unnecessary conflict.

The landscape within the individual plots should include substantial areas of dense trees and shrubs to screen the development from the surrounding areas.

4.1Landscape

Landscape should be an important consideration in helping to achieve a number of objectives: screening IAMP from important long views and helping it to blend well with the landscape; making strong connections with the adjacent countryside and making physical and visual links to it; and providing an attractive setting for development.

The approach to landscape should therefore address each of these layers; from the strategic structure running through IAMP to the detail of plots and how landscape addresses the street and public areas.

The tree and shrub planting should seek to provide year round screening, with native species towards the plot boundaries facing on to the adjacent agricultural areas.

Larger ornamental trees /advanced nursery stock should be planted towards the main road frontage (The Boulevard).

Green roofs should be considered to provide an additional layer of landscape within IAMP; they can be a valuable component in the wider strategy for water management for each plot: actively slowing the flow of water into the drainage network.

Every effort should be made to incorporate green roofs within a development, particularly for smaller single storey elements such as extensions, build-outs and porches.

Photograph - Nic Lehoux, www.archdaily.com/tag/olympia

Photograph - https://roofmeadow.wordpress.com/author/roofmeadow/page/3/

https://reepgreen.ca/2014/11/the-cora-group-inc/

1. Tree planting can provide a strong screen to break up the mass of a building;
2. Planting can help provide a buffer to a building;
3. SUDS and swales can provide a range of benefits;
4. Landscaping can help break down areas of car parking;

LANDSCAPING - CODE

General	The landscape within the individual plots should include where appropriate trees and shrubs to screen the development from the surrounding areas.
Earth mounds	Where space permits earth mounds could be created to increase the apparent and maturity height of the planting during the establishment period.
Species choice	Tree and shrub planting should include evergreen species to provide year round screening.
Planting design	The planting design should be appropriate to the size and scale of the industrial units. It should be bold and robust and easily accessible for maintenance.
Green roofs	Consideration should be given to the introduction of an element of green roof where practicable.

4.2 Area/Plot Lighting

Effective and appropriate lighting will ensure that IAMP operates effectively and looks good while also respecting the surrounding environment.

The Night sky

Wherever possible, steps will be taken to minimise light pollution on the night sky and light trespass on ecologically important areas.

The Hub

The Hub will be the focus for much activity and attract users from across IAMP as well as from the adjacent Nissan development. The lighting should project an attractive and inviting environment that will draw people to it and also make it safe, particularly during the early evening.

A strategic approach to lighting should help to reinforce its unique role; employing a combination of approaches that signifies the Hub as different from the remainder of the IAMP. This could entail lower level lighting columns, bollard lighting or uplighting within the public realm to help project a strong, positive and attractive image.

Individual plots

Plots should conform to the overall aspiration for lighting across the IAMP.

Perimeter lighting and car park lighting could adopt a range of solutions, including bollard lighting and uplighters .

Servicing and deliveries

Wherever possible, servicing should take place away from the ecological corridor to reduce unwanted glare and light pollution across the landscape. Consideration should be given to the experience throughout the year, particularly during shorter days in winter months.

https://www.ribaj.com/yorkshire

archdaily.com/786753/branksome-hall-athletics-and-wellness-centre-maclennan-jaunkalns-miller-architects

1. Lighting can be from a variety of sources;
2. Uplighting can add to the interest and be used to highlight landmarks;
3. A strong lighting scheme can help tie the IAMP together ;

LIGHTING - CODE

General	The lighting scheme should complement and work alongside the wider infrastructure lighting across IAMP. Vehicular routes should have appropriate lighting levels.
Sensitive areas	Lighting should be positioned and designed to reduce the impact of light pollution out into the ecological and landscape mitigation area.
Plot lighting	Feature lighting should be used to highlight parking areas and the route between the car park and the building entrance.
Car parking areas	Car parking areas should be well lit so that they feel safe. Bollard lighting should be considered to offer additional emphasis, where appropriate.
Service and delivery areas	Service areas to have flood lighting to provide adequate coverage but to minimise light spill. Shields should be attached to direct lighting.

4.3 Parking

The location, extent and design of car parking areas can have a significant impact on the way in which IAMP is used and perceived.

Whether related to staff or visitor parking, the rule of thumb is that car parking should be safe and secure, attractive and located in the most advantageous and obvious position.

Larger areas of car parking will require a sustainable approach to drainage and landscaping to create a visually attractive environment.

Position in relation to the building

Disabled and visitor parking should be as close to the entrance as possible, and seek to avoid conflict with other vehicles by having access directly to the entrance.

Safety and security

Parking should be positioned as close as possible to the front of the building, so that it can benefit from good natural surveillance and overlooking from those in the building.

Cycle parking for visitors should be clearly visible from the building.

Staff cycle parking should be in safe, well lit and secure location.

Landscape treatment

Large expanses of car parking should be broken up by landscaping, which can help soften the impact.

Car parking edges should have low level shrub planting along the perimeter that can act as a screen for vehicles but also allow surveillance above it.

1. Trees and planting can help to break up car parking areas;
2. There should be a logical relationship with the building and entrance;
3. Charging points should be provided;

PARKING - CODE

Visitor car parking	Car parking should be positioned as close as possible to the primary frontage of the building, defined as the most active frontage containing the entrance and any office space. Disabled parking should be incorporated.
Staff parking	Should be located on the principal elevation or a secondary elevation that has a strong active facade with good overlooking. All parking and provision should recognise and meet Sunderland City Council and South Tyneside Council standards, and where possible seek to exceed them.
Cycle parking	Cycle parking to be located in convenient, well-lit areas clearly visible from the building. Cycle parking for visitors should be located close to main visitor/ customer entrances.
Materials	**Main car parking areas:** Materials to suit a hard landscaping scheme; Use of permeable surfacing where feasible; All plots to integrate appropriate and adequate ambient lighting, bollards, bins, and cycle shelter. Clear pedestrian routes from parking to building to be delineated by surface treatment and lighting to ensure safety.
Charging points	Each plot should contain a number of charging points proportionate to the amount of car parking. This should be located in an obvious, convenient location with adequate space, good lighting and natural surveillance.

4.4 Servicing

Servicing and delivery areas should be in a logical and advantageous location within the plot, that relates to the internal operation of the building and the business as a whole but that does not conflict with the customer/visitor facing side.

Servicing and delivery areas should be located to minimise the impact onto the River Don corridor, so that undue glare and noise is kept to a minimum.

capitalandcentric.com/workspaces/lightbox

capitalandcentric.com/workspaces/lightbox

Dan Schultz - http://www.adelaidenow.com.au/

www.wavehub.co.uk/wave-hub-site/hayle-marine-renewables-business-park

1. Service areas should be attractive and well lit;
2. A simple palette of materials can be effective;
3. The use of colour can be effective when done discretely;
4. Lighting should be positioned to minimise glare;

SERVICING AND DELIVERIES - CODE

Location	Servicing and delivery areas should be positioned away from the River Don corridor, to minimise noise and disturbance to wildlife.
Access points	Larger plots with a high volume of vehicles or a large number of larger vehicles should, where possible, have a separate access for servicing and deliveries. Main operational vehicle access via side or back of development for larger buildings. Smaller buildings should have greater flexibility to enable parking to the front if necessary.
Refuse storage	Refuse storage areas will be located in accordance with occupier operational requirements, but generally they should be screened and located discretely and away from main entrances of buildings, but with regard given to where collection is practical.

Building elements within the Design Code

5.1 Facade Treatment (p42)

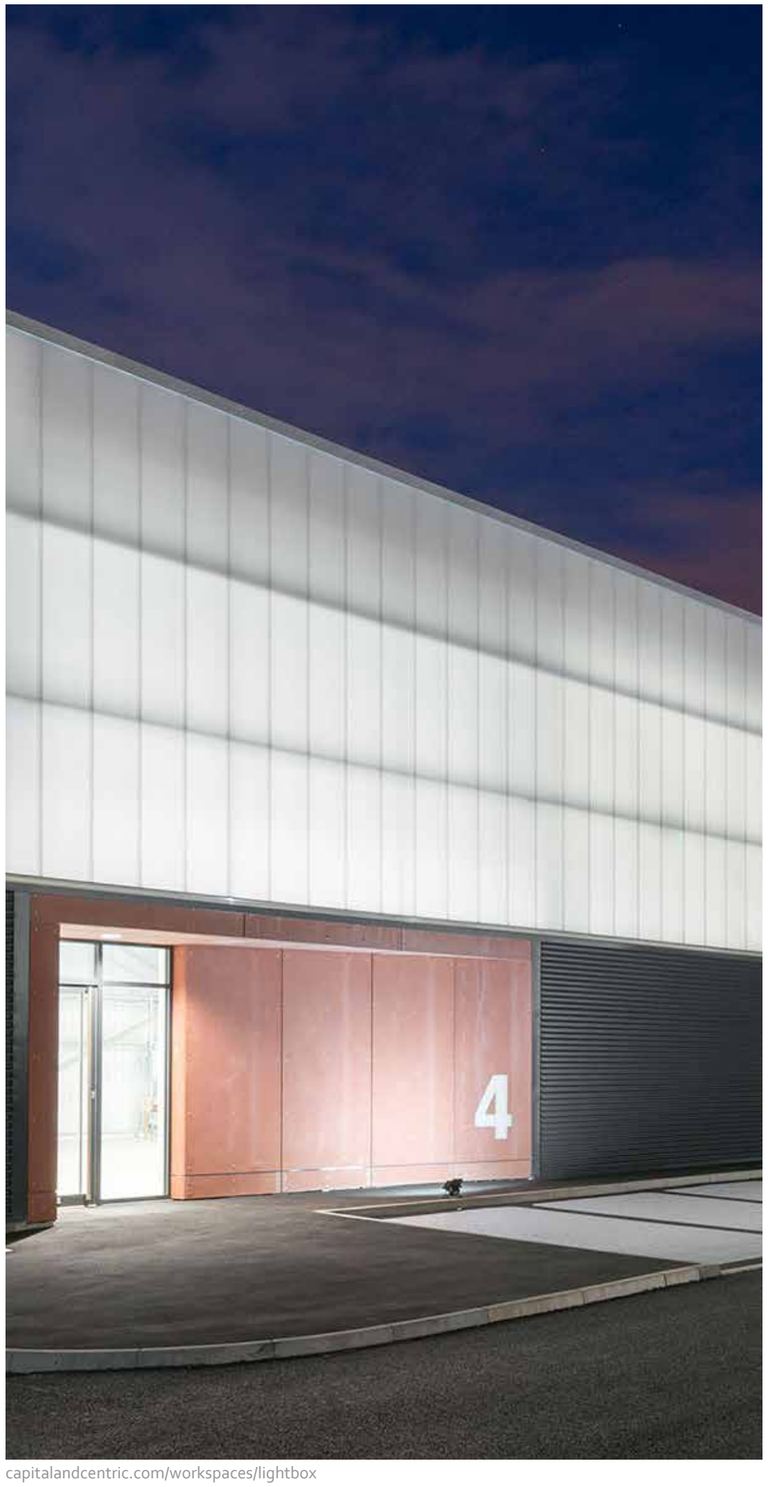
5.2 Active Frontages (p43)

5.3 Signage (p44)

5.4 Lighting (p45)

5.5 Sustainable Design (p46)

FIVE Building Design Principles



capitalandcentric.com/workspaces/lightbox

Section FIVE of the Design Code concerns individual building elements, and sets out the considerations and requirements that need to be met when building within IAMP.

The buildings will be the largest elements within IAMP, and it is essential that sufficient consideration is given to achieving high quality, robust and sustainable design that will both stand the test of time and provide the appropriate image and character for the development as a whole.

The individual elements that will be covered in this section are as follows:

Facade treatment

The materials used, their composition and disposition, will have a significant bearing on how the IAMP is appreciated and also how well it will age.

A simple palette of high quality materials will prove to be far more successful than an approach that seeks to hide the bulk of a building through unnecessary changes in material.

Active frontages

Given that the amount of active frontage in industrial and advanced manufacturing buildings is more limited than in other types of building, it is far more important to ensure that it is maximised and positioned to the greatest impact.

There will necessarily be 'back of house' operations connected with these uses, but what reception space and meeting room space there is should be located to provide a positive outlook for users within the building, as well as creating a strong interrelationship with those coming to visit.

It will be important that buildings have a positive relationship with the Green Routes and spaces running through the IAMP.

The position of entrances is also of key importance, and should relate well to the surrounding environment both within the plot (such as visitor parking) as well as how it relates to other features of the IAMP such as the Green Routes.

Different plots throughout the IAMP will also offer different demands on buildings, depending on where they are located.

Signage

Signage on a buildings should seek to achieve a number of things at various levels: provide advanced notice and additional branding for the business at one level, while also directing visitors to where they need to go easily and efficiently; from those arriving for meetings needing to locate car parking and reception, to drivers with deliveries understanding where they need to go to unload or pick up.

Lighting

Buildings need to be lit externally, through a variety of mechanisms, and the approach to this can have a significant bearing on the overall quality of a building, as well as reflect on the business itself.

Sensitive lighting on a building can help to highlight different elements, signposting entrances or particular features, without adding to overall glare and unnecessary light pollution.

Green roofs and walls

The introduction of green roofs and walls, where appropriate, can assist in the achievement of an integrated landscape strategy that addresses water management, ecology and sustainable building practices.

This can add to the wider landscape approach across the IAMP, while also assisting with achieving better insulation and reducing the overall drainage capacity requirements for a building.

Sustainable building design

There could be an overall strategy for sustainability, which should incorporate measures to reduce overheating, to incorporate appropriate insulation and to maximise the amount of natural daylight, among others.

5.1 Facade Treatment

There should be a strong and coherent approach to the treatment of facades. The overriding concept should be to keep the appearance and layout of buildings both simple, legible and uncluttered, ensuring that buildings sit harmoniously within the landscape in longer views, while also using colour and articulation to provide emphasis where necessary to provide interest closer to.

Facade composition can have a particular influence on the character of individual spaces, and the choice of materials should respond to the pedestrian network and the hierarchy of streets and spaces.

All buildings have a hierarchy of facades determined by its orientation within the plot and its relationship with the surrounding street network: one or more principal facades, which are the most prominent and visible elements of the building; **secondary** facades that may still be visible but are less prominent; and **tertiary** facades that are 'back of house'.

It may be that some buildings exhibit more than one type of facade. Equally, while all buildings will have a primary facade, there may be instances where there may not be either a secondary or tertiary facade. The hierarchy of facades should be agreed in discussion with the local planning authority.

Principal facades

Principal facades will be expected to use high quality materials and palette, in recognition of their public nature, and employ a unit size that can be experienced at a pedestrian scale.

Secondary facades

These facades should be composed of similarly high quality materials to reduce maintenance costs and avoid a stark variation in the architectural approach.

Tertiary facades

Sheds and production areas will generally be clad in profiled metal cladding, but designed with care to incorporate good quality and thoughtful detailing to provide relief and interest.

Glazing or translucent panels can be added to process and warehouse areas, where operational demands permit, to increase visual connectivity at ground level and to permit views in/out.

1. A simple palette of materials can be an effective solution;
2. Unusual materials can provide an interesting, lively facade;
3. Industrial-type materials can provide a strong yet simple aesthetic;
4. Using translucent materials together with lighting can provide interest;

Photograph - PGDesigns.co.uk

Photograph - Thomas Mayer, www.divisare.com

Photograph - https://www.morgancarr.co.uk

FACADE TREATMENT - CODE

General	The materials palette should ensure that buildings sit harmoniously within the landscape when viewed from distance. Colour and articulation should be introduced to provide interest and legibility when viewed closer up.
Principal facades	This should face onto the primary road and (where appropriate) also any other public routes. Buildings on prominent or visible corners could have more than one principal facade.
Materials	All materials to be weather-resistant, hard wearing, durable and readily available; Glazed areas should be combined to create larger areas of glazed wall to counterbalance areas of solid wall; Strong colours to provide emphasis where necessary;

5.2 Active Frontages

Active frontage within an Advanced Manufacturing Park environment is different to that which might be expected within a city centre or other urban setting. The nature of larger building types means that active frontage is far scarcer but also even more important as a result. Bigger buildings mean the instances of 'active frontage' are far more unconnected. Added to that, the nature of the types of uses and businesses means that there are comparatively smaller areas that can be seen as 'active'; with less front of house such as reception space or office uses.

Despite this, careful consideration of the positioning and design of buildings can ensure that attractive and lively frontages can be achieved in an Advanced Manufacturing Park style environment.

There should be a strong interrelationship between the facade treatment set out in Section 5.1 and the approach to active frontages: the more prominent and important the facade then the greater the degree of activity that should be expressed in its facade.

Principal facades

The internal layout of the building should be organised to support the delivery of an active frontage, with uses such as the reception and any office space orientated to provide windows and overlooking around the entrance to create a positive relationship between the forecourt and the building.

The principal facade should generally contain the main entrance, together with other active uses, such as reception space and offices. These can combine to form a significant element of glazing.

The entrance to a building is its public face, the point where visitors and workers head for upon arrival within the plot.

It is important, therefore, that the entrance should be positioned and designed in such a manner that will assist with legibility and wayfinding and help to reinforce the sense of arrival to the building.

Photograph - Stefan Müller-Naumann

Photograph - www.worldarchitecturenews.com

www.enterprisezones.communities.gov.uk/enterprise-zones-pass-12000-jobs-mark/

1. Even blank facades can be interesting;
2. Opening the building up to allow views of the processes inside;
3. Large expanses of glazing can allow views both in and out;

ACTIVE FRONTAGES - CODE

Frontage	**Boulevard**: A strong landscape edge along the A1290. **Primary Routes**: The principal access to each plot where primary facade should be orientated. **Green Routes**: Entrances should be located to take advantage of the green route where practical.
Entrance	**Primary entrances**: to have prominent feature signage and appropriate lighting. Entrance areas to be glazed and where possible located on corners and at key intersections of the frontage.
General location	Entrances should be located on the primary facade facing the principal road. Where the plot is on an junction of two principal roads, the entrance should be located on the corner so that it is visible from both roads.
Corner entrances	Corner entrances should aim to have activity in both orientations.

5.3 Signage

Good, attractive and effective signage is important to ensure that IAMP functions well for all who will use it, responding to the needs of workers and visitors as well as meeting the needs of pedestrians and cyclists.

Much signage within IAMP will require separate Advertisement Consent.

Signage falls under a number of different categories: **Estate signage** extending across IAMP; **Plot signage** covering advance signage for individual businesses; **Building signage** highlighting different functions; and **Hub Signage** that directs and attracts users to the different facilities within this part of IAMP.

Estate Signage

Estate wide signage needs to provide clarity and coherence, projecting an identity for IAMP while being clear and easy to interpret at appropriate distances, particularly for motorists.

Plot Signage

This needs to project the right environment for the business while serving the function of directing people. Taken at its most basic plot signage should be good at organising and highlighting the various elements of the plot: where the main entrance is; where servicing and deliveries should go and the location of the vehicle entrance and exit points.

Building signage

Building signage can encompass a number of different aspects: from the formal 'brand signage' such as the name of the company to the more detailed directional signage.

Building signage needs to work at a number of distances: easily visible from the car park and legible from distance on the one hand, but also complemented by signage that can be scrutinised at close quarters for pedestrians.

Hub signage

Signage within the Hub needs to help contribute towards its function as a destination in its own right: attracting visitors from both IAMP as well as existing workers and visitors at Nissan, and needs to offer the appropriate environment.

This should include consideration of a range of appropriate solutions, including canopy signs, lettering on windows and projecting signs.

1. Wayfinding can be playful and bold;
2. Advanced signage should be seen from the street;
3. Colour and light can provide interest;

1

http://www.segreen.comw

2

http://twincontrol.eu/

3

http://www.communitydevventures.com/

SIGNAGE- CODE

General	Signage should be legible and located in clearly visible areas, at a common height to surrounding buildings. Signage should be appropriately lit in recognition of its location, and efforts should be made to ensure that this lighting does not create undue light pollution.
The ELMA	Signage facing the Ecological and Landscape Mitigation Area (ELMA) should be of a scale and type to retain the integrity of the landscape setting and not represent a harmful intrusion on the countryside.
Building signage	The size, scale, type and location of signage should be informed by the overall composition of the building, and demonstrate a coordinated approach.
Hub signage	A range of signage solutions should be considered to create a convivial and attractive environment. Signs should primarily be designed to be experienced and interpreted by pedestrians at close quarters.

5.4 Building Lighting

Lighting should aim to emphasise the key elements of the building - particularly the entrance - in order to help its legibility and prominence.

A variety of lighting options should be considered to provide the appropriate levels necessary while not adding to overall glare: this can include uplighting and down-lighting that can pick up features of the building, or the use of translucent materials with back-lighting.

Buildings in the Hub

The Hub will be the focus for any communal activity across IAMP and will attract users from across the development as well as from the adjacent Nissan development.

Lighting needs to be mindful of the need to respect the setting of the IAMP and not contribute to wider light pollution, while lighting the Hub buildings to make it an attractive, feel safe and inviting destination.

A range of external lighting solutions should be considered that can both help to articulate the buildings and support the intended uses, as well as the key pedestrian routes into the Hub.

Servicing and deliveries

Servicing should take place away from the ecological corridor to reduce unwanted glare and light pollution across the landscape. Efforts should be taken to consider how the area may be lit and how this will be experienced throughout the year, particularly during shorter days in winter months.

Photograph - http://capitalandcentric.com/workspaces/hangar

capitalandcentric.com/workspaces/lightbox

https://www.google.co.uk/search?q=lit+thurles+strength+and+conditioning

1. Lighting coupled with transluscent facade creating an active elevation;
2. Good lighting can highlight activity and operations within;
3. Feature lighting can help to highlight the entrance;

BUILDING LIGHTING - CODE

General	The lighting scheme should complement and work alongside the wider infrastructure lighting across IAMP.
Sensitive areas	Lighting should be positioned and designed to reduce the impact of light pollution out into the ecological corridor and surrounding landscape.
Feature lighting	Feature lighting could be used to highlight entrances.

5.5 Sustainable Design

The aspiration is for IAMP to be an attractive working environment that creates the conditions in which businesses can establish and thrive and where people choose to work.

Creating the right type of buildings is a critical component in realising this, and the IAMP Design Code seeks to encourage sustainable buildings that are not only energy efficient and cost effective to run but which also offer benefits for occupiers.

This is important for two reasons: it helps to reduce running costs and in so doing helps retain business competitiveness; it also helps the quality of the working environment and helps to prevent workplace sickness and absence.

These factors combine to mean that IAMP can become an attractive place to locate to and to work.

Natural daylighting

Opportunities should be taken to maximise the amount of natural daylight entering buildings, which will not only create an attractive working environment but reduce ongoing energy demands throughout the life of the building.

The introduction of north lights can not only offer an interesting roof form in a simple manner, it introduces non-glare natural light into the depth of the building, which is of particular use and importance in the 'R&D' buildings.

Brise soleil

The introduction of solar shading, such as brise soleil, can help to minimise undue heat fluctuations, particularly for buildings with large expanses of south facing glazing.

Solar shading may be needed on the south, east and west facing elevations, in order to reduce solar gain in the development. This can also be used as an architectural device to add depth to external walls, and to break up larger areas of cladding and glazing.

Photograph - www.kalwall.com

https://i.pinimg.com

1. Natural daylighting can reduce the energy demands;
2. Orientation can maximise natural daylighting;
3. Brise soleil can be an attractive approach on south facing elevations ;

SUSTAINABLE DESIGN - CODE

Built form and aspect	Buildings should recognise and take opportunities to respond to the orientation and take cues from it that will assist in achieving sustainable design. Efforts should be made to encourage natural light into buildings, particularly deep plan buildings. Solar shading such as brise soleil or canopies may be considered to reduce solar gain and glare where necessary.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