

C3577

**PROPOSED RESIDENTIAL DEVELOPMENT AT
DEVERON ROAD, HUNTLY, ABERDEENSHIRE**

STREET ENGINEERING REVIEW

Revision A – 25/04/2019

Revision B – 03/08/2022

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ORIGINAL COMBINED STAGE 1 AND STAGE 2 ROAD SAFETY AUDIT BY WYG
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1.0 **INTRODUCTION**

The proposed development consists of the construction of a 37 No. affordable housing development. The housing will be a mixture of terraced units and flats.

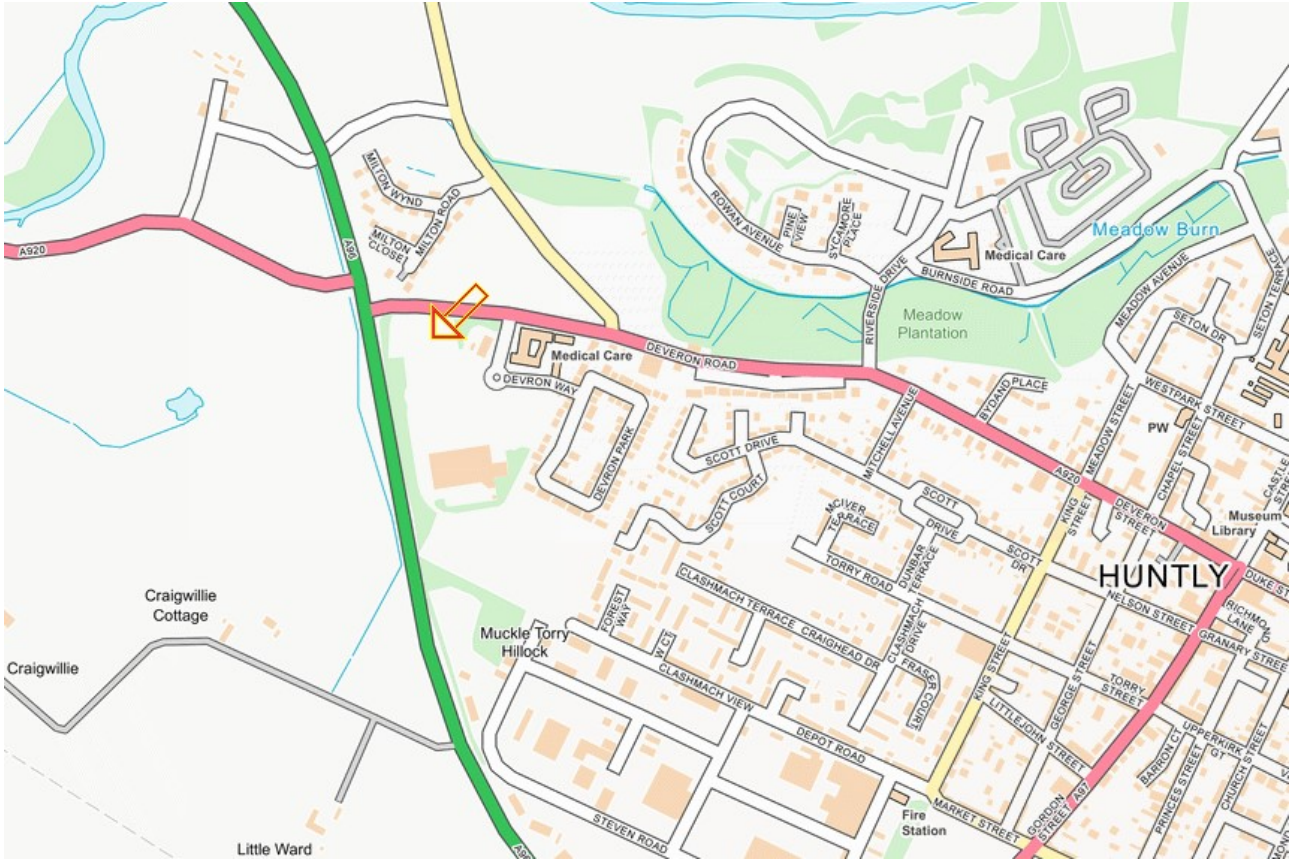
The site is currently undeveloped land. The site is located to the west of Huntly and is bounded by the A96 to the west and the A920 – Deveron Road to the north. An existing access road serving an existing supermarket is located to the south. An existing petrol station is located to the east of the site.

The development has an approximate area of 0.74 Hectares.

Aberdeenshire Council requires a Street Engineering Review for the proposed development in accordance with the Scottish Government's "Designing Streets" policy document.

2.0 SITE LOCATION

Fig 1 – Site Location Plan



The proposed development is located to the west of Huntly, Aberdeenshire (OS Grid Ref: 351815E, 840267N).

3.0 **SCOPE OF REPORT**

In order to comply with the National Policy, Designing Streets, a Street Engineering Review (SER) is required. The SER should be undertaken in accordance with Local Authority guidance and relevant National Policy/Guidance (e.g. Designing Streets).

The SER should include areas such as agreement of street layout including landscaping proposals in relation to the following:

- Vehicle tracking of layout (particular attention to be given to refuse vehicles and buses)
- Approval of key visibility splays
- Speed control
- Agreement of drainage discharge rates
- Agreement of SUDS techniques
- Schematic drainage layout for foul and surface water including dimension requirements against building and landscaping
- Key materials palette
- Utilities strategy

4.0 DEVELOPMENT PROPOSALS

4.1 Development Description

The development is located to the west of Huntly. The development will take access from an existing Aberdeenshire Council adopted road, with an existing private supermarket access road located to the west of the adoptable road. An existing Aberdeenshire Council adoptable junction to our site can be found off the end of the existing adoptable road. This junction is where the access to our site will be taken.

The A96 Trunk Road is located to the west of the development.

The access road through the proposed development will be designed for a 20kph design speed and will be a shared surface road.

The access road will be designed to a "Housing Road" specification, but will remain private. There will be various areas of block paving located at points where non-motorised users enter the shared surface areas.

An existing access to a Scottish Water pumping station will be upgraded and changed to be accessed from the proposed development roads.

A road narrowing has been incorporated into the layout to assist with reducing speeds through the development. The road narrowing will incorporate block paving to increase the perception that speeds need to be lower through the development.

The proposed car parking bays will be surfaced in porous paving and will be distinct from the standard road surfacing and standard loc-block. The proposed car parking bays will remain private.

4.2 Vehicle Tracking of Layout

Using industry recognised software, AutoTrack, swept paths were generated to demonstrate that the site layout was adequate. Please refer to Ramsay and Chalmers drawings C3577/105/F and 106/H which are included in Appendix A.

4.3 Visibility Splays

Stopping sight distance has been evaluated according to Table 16.1 of the Aberdeenshire Council's Standards for Road Construction Consent and Adoption included in the interim update (March 2014).

The existing road network has a design speed of 60kph therefore the stopping sight distance along the existing access road is 59m. The junctions has been evaluated based on a visibility splay of 2.4m x 59m.

The proposed access road has a design speed of 20kph therefore the stopping sight distance is 15m. The proposed internal road junctions have been evaluated based on a visibility splay of 2.4m x 15m. The minor access from the car park area will has been evaluated on a visibility splay of 2.0m x 20m

Please refer to Ramsay and Chalmers drawing C3577/100/N which is included in Appendix A.

4.4 Speed Control

It is anticipated that overall usage of the access roads will be low. It is proposed to provide a formal speed control measure by providing a road narrowing on the proposed access road at chainage 0+60 on Road RD-A. There will be a variety of road surface materials to give the perception that vehicular traffic does not dominate the proposed access road. The off-road parking spaces will also help to create visual changes and help keep speeds low.

4.5 Drainage Discharge Rates

Due to the existing surface water sewers being at capacity, discharge to ground has been determined as the drainage solution, which will be located under the parking spaces within the housing development. In compliance with the Building Standards, 5m offsets from the residential buildings have been achieved. The infiltration rate used is $5.07 \text{ E}^{-5} \text{ m/s}$.

4.6 SUDS Techniques

In accordance with CIRIA – SUDS Manual C753 the surface water run-off from the roads is classified as a low risk of causing pollution to receiving watercourses.

Historically, consideration was given to porous surfacing, bio-retention, filter trenches, swales, basin and cellular storage.

As porous surfaces are generally considered undesirable by the Council for access roads and considering the additional maintenance involved, porous surfacing was dismissed for the proposed access road. This decision was made when the internal roads were being put forward for adoption with the Aberdeenshire Council's Roads Department.

However, the private car parking spaces will be surfaced using porous block paving to treat the surface water at source. The porous paved parking bays will be a subbase infiltration system and will discharge to the existing subsoils.

Bio-retention was dismissed as it is not conducive to site conditions.

Roadside swales and/or filter trenches were considered due to their desirability as treatment close to source. However, the number of proposed properties creates significant difficulties conveying the water to the green open spaces and creates a risk of flooding.

Surface water run-off from the roads will be collected via trapped gullies or will run into the porous paving car parking spaces. The trapped gullies offer pre-treatment for sediment removal as noted in SUDS for Roads, before discharging directly into the infiltration cells. The water will collect in the channels of the parking bays and be held until infiltration through the blocks can be achieved. Plot drainage will be collected via rainwater downpipes for roofs. The plot drainage will discharge to the infiltration cells.

The proposed surface water system will convey the surface water to the subsoils, to match the existing scenario on the site. Infiltration cells will be provided in the subbase of the porous car park spaces.

The proposed surface water sewers, gullies and porous paving will be the responsibility of the Aberdeenshire Council Housing Department.

Please refer to Ramsay and Chalmers drawing C3577/103/U which is included in Appendix A.

4.7 Foul Drainage

Waste water will be discharged to a proposed foul water sewer under the proposed roads, from the proposed individual plots. This foul water sewer conveys the waste water to the existing Scottish Water foul water sewer located on the existing access road serving the existing supermarket.

The proposed foul water sewers and manholes will be the responsibility of Scottish Water.

Please refer to Ramsay and Chalmers drawing C3577/103/U which is included in Appendix A.

4.8 Key Materials Palette

The proposed shared surface access road will be standard grey/black asphalt. There will be sections of the road which will be paved using block paving. The car parking bays will be surfaced with porous paving.

Please refer to Ramsay and Chalmers drawing C3577/100/N showing the extent of the various surfaces which is included in Appendix A.

4.9 Utilities Strategy

Services will be located beneath the proposed access road with crossings to individual plots as required. A service zone has been identified through the shared surface areas.

Foul and Surface Water sewers will be located beneath the road carriageway. Services will be installed in accordance with current standards and individual service provider requirements.

It is anticipated that Scottish Water, Power and BT services will be brought into the site.

Please refer to Ramsay and Chalmers drawing C3577/111/B showing the services routes which is included in Appendix A.

4.10 Landscaping

A landscaping proposal for the development has been prepared by DWA Landscape Architects and will form part of the planning submission for the proposed site.

4.11 Parking Provision

Please refer to T.H.E. drawing DEV-THE-ZZ-ZZ-DR-A-90006 Rev P03, which has been included in Appendix A showing the distribution of parking through the development. A number of visitor parking spaces have been identified on the drawing.

4.12 Street Lighting

The specification and layout for the street lighting columns and lanterns will be designed and specified in accordance with the Aberdeenshire Council Specification, but the lighting will remain private.

4.13 Pedestrian Access and Cycle Routes

An existing shared cyclepath/footpath is located along the eastern boundary of the development. The existing shared cyclepath/footpath links the existing access road serving the existing supermarket to the A920 – Deveron Road. There is no specific cycle route through the development but the roads are designed to be low speed with speed control measures.

The shared surface roads within the development will be able to be used by non-motorised users.

4.14 Site Levels

Please refer to Ramsay and Chalmers drawing C3577/108/A which is included within Appendix A for the existing site falls.

The proposed roads generally follow the existing ground falls.

The proposed shared surface roads have been restricted to a maximum gradient of 2% to assist pedestrians negotiate the layout.

Please refer to Ramsay and Chalmers drawings C3577/101/E which is included in Appendix A for road longitudinal sections showing the existing ground in relation to the proposed road profiles.

5.0 QUALITY AUDIT

5.1 Visual Quality Audit

The proposal is to develop the site for residential use to accommodate 37 No. affordable homes. The units comprise a mix of one, two, three and four bedroom homes which will be delivered as a single build out for an affordable housing provider.

The development will provide a frontage along Deveron Road, the flatted dwellings to the west of the site will provide an attractive feature at the northwest corner as a gateway to the development. At the centre of the site, an attractive area of open space has been incorporated which can be enjoyed as a community space by all residents. There are a number of paths which have been strategically located across the development to provide links to the north and south to the supermarket. The internal roads have been designed as a shared space with pinch points and suitable materials to naturally slow traffic within the site. This will make these areas much safer and enhance the use of these to ensure they are not restricted to vehicular use. Collectively these give the design a visually welcoming appeal which is attractive to residents and visitors.

Landscaping on the site has been designed to provide attractive greenspaces, the use of tree planting will add to the biodiversity of the development where there are currently limited trees.

5.2 Review Of How The Street Will Be Used By The Community

Due to the speed reducing features to be provided as described in the SER, traffic speeds will be low in the development. The proposed access road through the development will generally be a 6.0m wide shared surface road. The shared surfaces will be able to be used by non-motorised users.

5.3 Road Safety Audit

Please refer to Appendix B for the original Road Safety Audit and Designer response. Richard Pearson, the original Road Safety Auditor for this development, now of DrummondBlack, has reviewed the latest drawings and has included his findings in Appendix C.

5.4 Inclusive Access Audit

The gradients of the new roads are generally between 0.8% and 2% gradient. These gradients will make it relatively easy for mobility impaired users to move around the development. Pedestrian crossing facilities with drop kerbs are provided throughout the site to assist pedestrian crossing the access roads through the development. Tactile surfacing is part of each crossing to assist visually impaired users. It is proposed to install Corduroy paving to delineate surface changes, eg end of a footpath where it joins a shared surface road.

5.5 Walking Audit

A walking audit forms part of the Non-Motorised User and Accessibility Audit which has been carried out by WYG Transport Planning. The original Non-Motorised User and Accessibility Audit is included in Appendix B. Richard Pearson, the original Road Safety Auditor for this development, now of Drummond Black, has reviewed the latest drawings and has included his findings in Appendix C.

5.6 CYCLE AUDIT

A Cycle Audit forms part of the Non-Motorised User and Accessibility Audit which has been carried out by WYG Transport Planning. The Non-Motorised User and Accessibility Audit is included in Appendix B. Richard Pearson, the original Road Safety Auditor for this development, now of Drummond Black, has reviewed the latest drawings and has included his findings in Appendix C.

5.7 CONCLUSION

The development was adequately evaluated and developed to consider and balance the above elements. The original layout was approved during the original planning application. Due to the required site layout changes to the north of the site, we believe the principles originally approved are still being followed.

We consider that the development has been value engineered to maximise the potential for the site with areas which consider the principles of Designing Streets whilst providing an attractive and pleasant setting.