

EARLY YEARS FACILITY, CASTLE BATCH PRIMARY SCHOOL, WESTON SUPER MARE, BS22 7FN FLOOD RISK STATEMENT

Project name **Early Years Facility, Castle Batch Primary School, Weston Super Mare, BS22 7FN**
Project no. **1620013472**
Document type **RP**
Version **1**
Date **25/11/2021**
Prepared by **Jo Thorp**
Checked by **Simon Gaskell**
Approved by **Simon Gaskell**

1. Introduction

1.1 Background

Ramboll was commissioned by Kennet Construction Limited to prepare a Flood Risk Statement for the proposed development of a new early years facility, to be constructed at Castle Batch Community School in Weston-super-Mare at NGR: 336422, 164004 (the 'Site').

This Flood Risk Statement is provided to support the timely submission of a planning application for the proposed development, for which a full Flood Risk Assessment (FRA) shall be submitted to the Local Planning Authority. The Flood Risk Statement identifies the regulatory status of the site with regards to flood risk and outlines the principles that shall be applied in the full FRA.

1.2 Site Location and Description

The Site as a whole comprises an existing school and playing fields which cover approximately 1.6 hectares (ha) in the North Worle area of Weston-super-Mare, approximately 5 km to the north east of the town centre.

The proposed development would be situated in the south east of the school site and would comprise a rectangular single storey building with a footprint of approximately 231 sq m which would be served by a covered external play area of 75 sq m, existing pedestrian access from Rawlins Avenue would be retained and a new pedestrian access route to the Community College building would be developed to the north of the early years centre (Appendix A, Proposed Block Plan).

1.3 Requirement for a Flood Risk Assessment

Key planning requirements in England with respect to flooding are outlined in the National Planning Policy Framework (NPPF)¹. The NPPF requires that an FRA should be submitted with planning applications for all development sites within Flood Zones 2 and 3; and all development sites over one ha in area in order to determine the risks of flooding from all sources including rivers, the sea, sewers and groundwater. An FRA is therefore an essential element in the overall acceptability of a proposed development in planning terms.

The NPPF sets out that flood risk should be defined according to the Environment Agency (EA) Flood Map for Planning, according to which flood risk is classified as follows:

- Flood Zone 1 (Low Probability): annual probability of flooding less than 1 in 1,000 (<0.1%);

¹ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

- Flood Zone 2 (Medium Probability): annual probability of flooding more than 1 in 1,000 (0.1%) but less than 1 in 100 (1%) for fluvial flooding or 1 in 200 (0.5%) for tidal flooding; and
- Flood Zone 3 (High Probability): annual probability of flooding more than 1 in 100 (1%) for fluvial flooding or 1 in 200 (0.5%) for tidal flooding.

1.4 Local Planning Policy

Long term objectives and strategic planning policy for North Somerset, to 2026, are set out in the North Somerset Council Core Strategy (adopted 2012). Environmental impacts and flood risk assessment are addressed in CS3 which sets out adherence to the NPPF and identifies that, as significant areas of North Somerset are low-lying, flood risk is an important matter. CS3 also states that new development will need to be mindful of the increased risks of flooding as a result of climate change.

Further Council requirements² state that flood risk assessment for new developments should take into account:

- the type of development;
- the size of site and its location in relation to flood zones;
- the amount of surface water runoff the site will discharge; and
- other sources of flooding (e.g. groundwater).

2. Hydrology and Flooding

2.1 Surface Water

The nearest surface water body to the Site is the River Banwell approximately 245m north east of the site. The River Banwell (an artificial channel) ultimately discharges into the Bristol Channel to the north at Woodspring Bay through New Bow Sluice, a tidal defence structure. The Banwell is characterised by a shallow gradient and flows are dominated by the tidal locking of the New Bow Sluice. Sand Bay is the nearest coastal area, approximately 4 km to the west of the Site.

2.2 Flood Zone Classification

According to the EA's Flood Map for Planning (published online), the Site is shown to be wholly within Flood Zone 3. All the requirements of the NPPF in relation to planning and flooding for sites in such a flood zone are therefore applicable.

It is important to note, however, that the designation of Flood Zones made on the EA's indicative flood map does not take into account the presence of defences. The entire area surrounding the Site is shown to be designated by the EA as an 'Area Benefitting from Defences'. According to the EA, an Area Benefitting from Defences benefits from the presence of defences for a 1 in 100 (1%) chance of flooding each year from rivers; or a 1 in 200 (0.5 %) chance of flooding each year from the sea. It is further understood that works have been completed since 2010 on the Weston-super-Mare flood defences to ensure that these continue to offer that level of protection allowing for climate change over the next 100 years.

2.3 Surface Water (Pluvial) Flood Risk

The Site is predominantly within an area assessed by the EA to be at Very Low risk of surface water flooding, such areas are assessed by the EA to have an annual probability of flooding of less than 1 in 1,000 (0.1%). Small areas of the site (which correspond with existing pedestrian access routes) are shown to be at a Low risk of surface water flooding, such areas are assessed by the EA to have an annual probability of flooding of between 1 in 100 (1%) and 1 in 1,000 (0.1%).

² <https://www.n-somerset.gov.uk/my-services/planning-building-control/planning-advice/flood-drainage-risk-advice>

2.4 Historic Flooding

A review of the North Somerset Council Strategic Flood Risk Assessment (SFRA) and EA GIS records suggests that the Site has not been impacted by flooding in the past.

3. Surface Water Runoff

A suitable surface water drainage strategy shall be implemented at the site such that the surface water runoff regime is managed appropriately and there would be no increased flood risk to third parties. In line with the NPPF and associated Planning Practice Guidance (PPG), management of surface water runoff at the site shall be configured such that flood risk will not increase for events up to and including a 1 in 100 (1%) annual probability rainfall event, taking into account an appropriate allowance for climate change.

Attenuation of surface water runoff shall be carried out at the site such that peak discharge rates are no greater than those prior to development. The proposed surface water management strategy shall be derived based upon the principles of SuDS, in accordance with NPPF and SuDS guidance.

The full FRA shall take into account pre-development runoff rates at the site based on DEFRA guidance³, using Greenfield Runoff Rates calculated by a recognised statistical methodology⁴.

4. Preliminary Flood Risk Assessment

4.1 Flood Mechanisms

The principal flood risks to the Site would be associated with tidal flooding from the Bristol Channel or fluvial/surface water flooding from the River Banwell. The EA Flood Map for Planning shows the area to benefit from flood defences. The SoP of the defences would therefore be equivalent to a 1 in 200 year tidal flood or 1 in 100 year fluvial flood. Due to these defences, the Site is considered to be appropriately-defended such that it would not flood during such events.

The EA Surface Water Flood Map shows the Site to be at very low/low risk of pluvial flooding. The proposals are not considered to be at significant risk of flooding from other sources including artificial water bodies or groundwater.

4.2 Sequential Test and Exception Test

The full FRA, to be submitted to North Somerset District Council, shall assess the suitability of the proposed development in line with the Sequential Test (if this should be applied to the site) and Exception Test, as set out in the NPPF.

As the proposed Early Years facility would offer provision within the context of the existing Castle Batch Primary School, in response to demand at this location, the consideration of alternative sites is not considered practical and as such the application of the Sequential Test should not strictly apply. It is Ramboll's understanding that the proposed development shall be in line with the development plan for the local area, which should have been subject to a suitable appraisal of strategic flood risks and applying a sequential approach when determining appropriate sites for development.

³ <https://www.gov.uk/flood-and-coastal-erosion-risk-management-research-reports/rainfall-run-off-management-for-urban-developments>

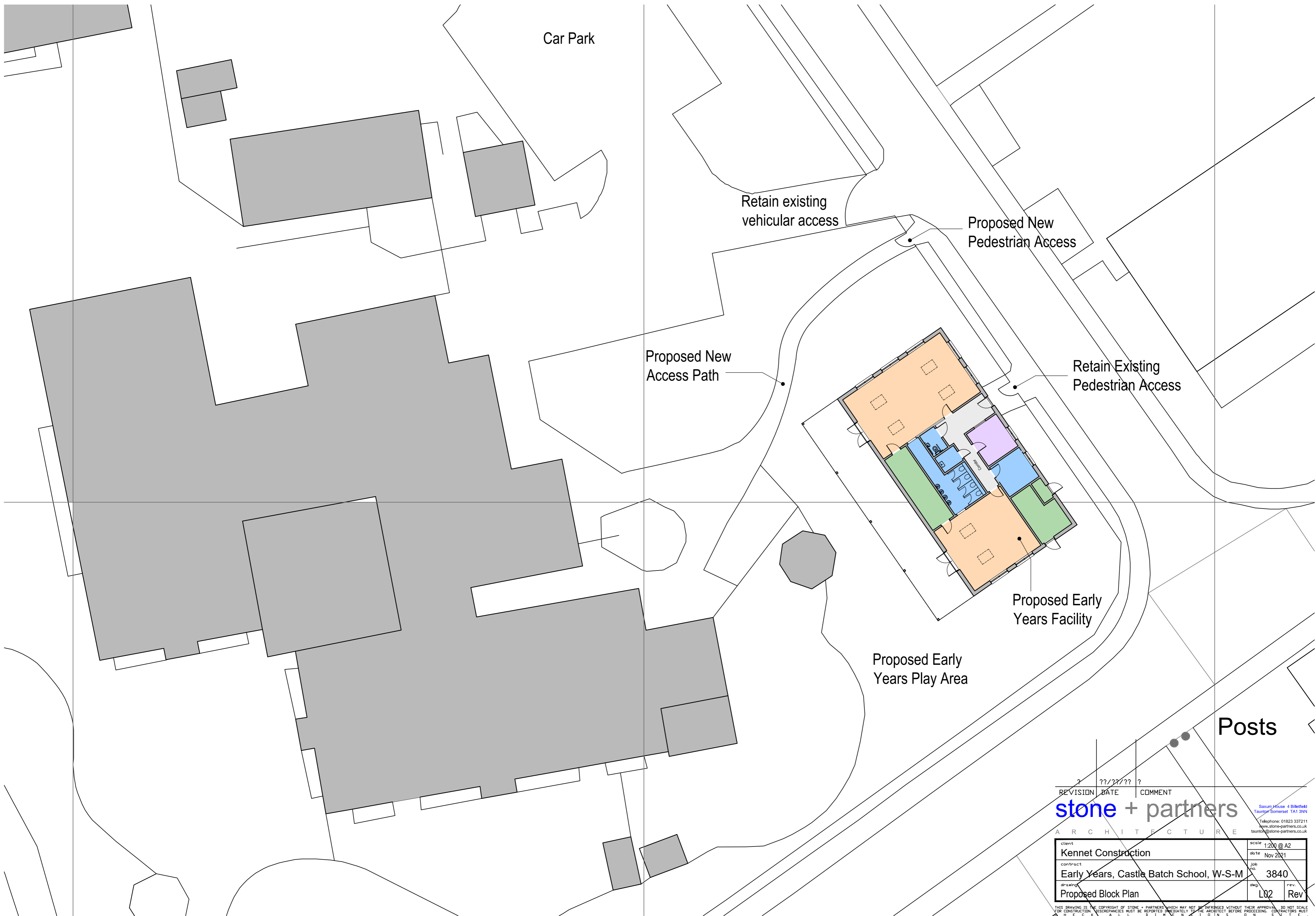
⁴ <https://www.uksuds.com/tools/greenfield-runoff-rate-estimation>

Under the NPPF, educational establishments are considered to be 'more vulnerable' development. Where the Sequential Test is passed, more vulnerable development in Flood Zone 3 must also pass the Exception Test.

The Site is shown to be protected from flooding up to the 1 in 100 year fluvial flood risk and the 200 year tidal flood risk. On the basis of relatively recent upgrades to the flood defences in Weston-super-Mare, these defence standards would remain appropriate for the next 100 years allowing for the potential impacts of future climate change. The full FRA shall aim to provide a more detailed assessment of the standard of protection of defences, taking into account climate change. Provided the status of defences affording the site is confirmed, it should not therefore be necessary to take additional measures to protect the Site from flooding.

The drainage strategy for surface water runoff from the proposed development shall ensure that there is no increase in surface water runoff rates from the Site and that rainfall events, up to the 1 in 100 (1%) annual probability event, shall be accommodated.

Appendix A: Proposed Block Plan



Car Park

Retain existing vehicular access

Proposed New Pedestrian Access

Proposed New Access Path

Retain Existing Pedestrian Access

Proposed Early Years Facility

Proposed Early Years Play Area

Posts

REVISION	DATE	COMMENT
	??/??/??	?

stone + partners
ARCHITECTURE

Saxum House 4 Biltfield
Taunton Somerset TA1 3NN
Telephone: 01823 337211
www.stone-partners.co.uk
taunton@stone-partners.co.uk

client	Kennet Construction	scale	1:200 @ A2
contract	Early Years, Castle Batch School, W-S-M	date	Nov 2021
drawing	Proposed Block Plan	job no.	3840
		dep.	L02
		rev.	Rev

THIS DRAWING IS THE COPYRIGHT OF STONE + PARTNERS WHICH MAY NOT BE INFRINGED WITHOUT THEIR APPROVAL. DO NOT SCALE FOR CONSTRUCTION. DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT BEFORE PROCEEDING. CONTRACTORS MUST CHECK ALL DIMENSIONS ON SITE.