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Surface Water and SuDS Assessment Rev1

Land Adj to Nightingales,
Bolney,
Haywards Heath,
RH17 5PJ

8 June 2026

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Appendices

Appendix A - Site Location Plan

Appendix B - Proposed Site Layout Plan

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2. Planning Policy- Flood Risk and Surface Water Management

National Planning Policy Framework

The aim of the National Planning Policy Framework (NPPF) (and accompanying Planning Practice Guidance (PPG)) is to direct development away from areas at highest risk of flooding; where development is necessary, it should be made safe without increasing flood risk elsewhere.

The NPPF states that a Flood Risk Assessment (FRA) is required to support a planning application for developments that are:

- located in Flood Zone 2 and/or Flood Zone 3
- located in Flood Zone 1 and comprise 1ha or above

In some instances, for example where a site is located in Flood Zone 1 and comprises less than 1ha, an FRA may be required if the site is within an area which has critical drainage problems (i.e. a Critical Drainage Area - CDA) as notified to the Local Authority by the Environment Agency (EA).

In order to provide an indication of the flood zone classification of the site, and to ascertain whether an FRA is required, the starting point is the EA flood maps which are available on the EA website.

Environment Agency Flood Map

The EA flood maps show fluvial and tidal flood outlines based on the following:

- Flood Zone 1 - land assessed as having less than 1 in 1000 annual probability of river or sea flooding
- Flood Zone 2 - land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding, or between a 1 in 200 and 1 in 1000 annual probability of flooding from the sea
- Flood Zone 3 - land assessed as having a 1 in 100 or greater annual probability of river flooding, or a 1 in 200 or greater annual probability of flooding from the sea

The flood maps available on the EA website confirm that the site is located in Flood Zone 1.

Pre-Application Advice

As part of their pre-application advice, the LPA has advised:

Flood Risk Assessment - no surface water flood risk but bottom part of unmade track there is a pond in front of a property (The Thatched House) 20m buffer zone which goes across access and would suggest would therefore need an FRA. Caveat by saying if that is the only route out of the site to get out to safety, but if there is an alternative means of escape it will not matter.

The following section assesses the risk of flooding from all sources, including the LPA comments regarding the pond in front of The Thatched House.

Mid Sussex District Plan 2014 – 2031

DP41: Flood Risk and Drainage

Strategic Objectives:

- 1) To promote development that makes the best use of resources and increases the sustainability of communities within Mid Sussex, and its ability to adapt to climate change; and
- 2) To support sustainable communities which are safe, healthy and inclusive. Evidence Base: Gatwick Sub Region Water Cycle Study; Strategic Flood Risk Assessment; Water. People. Places SuDS guidance.

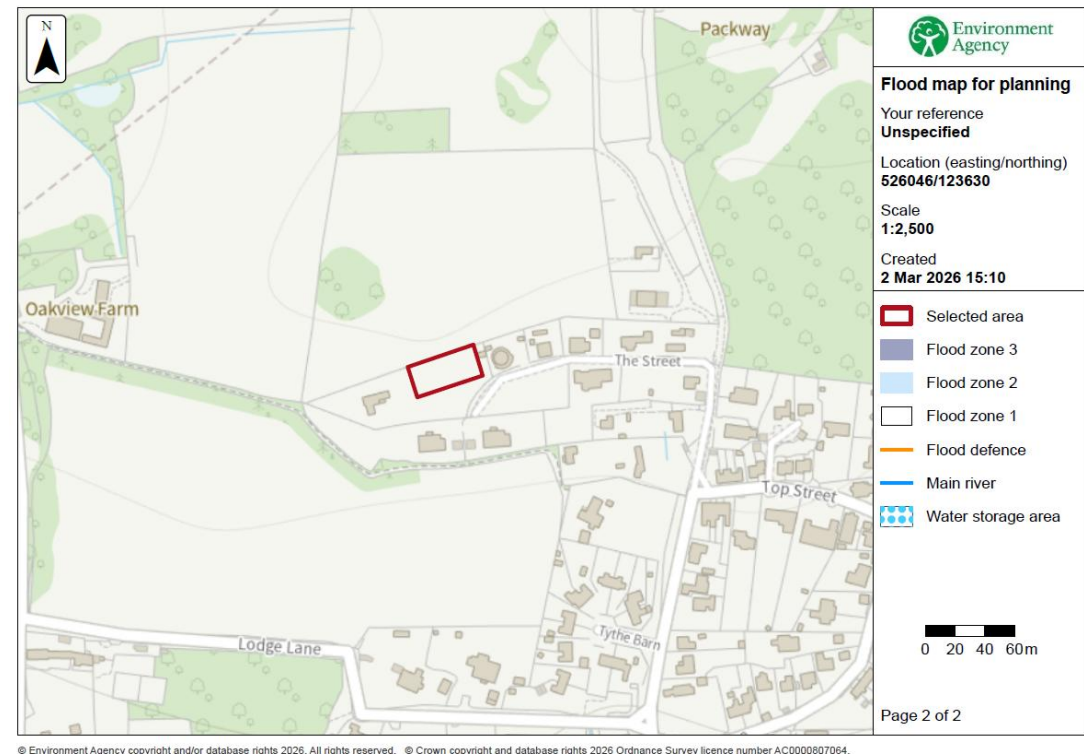


Figure 2 - Environment Agency Flood Map

Proposals for development will need to follow a sequential risk-based approach, ensure development is safe across its lifetime and not increase the risk of flooding elsewhere. The District Council's Strategic Flood Risk Assessment (SFRA) should be used to identify areas at present and future flood risk from a range of sources including fluvial (rivers and streams), surface water (pluvial), groundwater, infrastructure and reservoirs.

Particular attention will be paid to those areas of the District that have experienced flooding in the past and proposals for development should seek to reduce the risk of flooding by achieving a reduction from existing run-off rates.

Sustainable Drainage Systems (SuDS) should be implemented in all new developments of 10 dwellings or more, or equivalent non-residential or mixed development²² unless demonstrated to be inappropriate, to avoid any increase in flood risk and protect surface and ground water quality. Arrangements for the long term maintenance and management of SuDS should also be identified.

For the redevelopment of brownfield sites, any surface water draining to the foul sewer must be disconnected and managed through SuDS following the remediation of any previously contaminated land.

SuDS should be sensitively designed and located to promote improved biodiversity, an enhanced landscape and good quality spaces that improve public amenities in the area, where possible.

The preferred hierarchy of managing surface water drainage from any development is:

1. Infiltration
2. Attenuation and discharge to watercourses; and if these cannot be met,
3. Discharge to surface water only sewers. Land that is considered to be required for current and future flood management will be safeguarded from development and proposals will have regard to relevant flood risk plans and strategies.

Non-Statutory Technical Standards for SuDS 2025

The National Sustainable Drainage Systems (SuDS) Standards (2025) provide updated, non-statutory guidance for the design, construction, and long-term management of SuDS in new developments. Their purpose is to promote high-quality, multifunctional drainage that manages flood risk, improves water quality, supports biodiversity, and enhances the character and amenity of places.

The standards place strong emphasis on early integration of SuDS in the site design process, promoting a holistic approach that mimics natural hydrology and treats rainfall as a valuable resource. A key change in the 2025 update is the prioritisation of rainwater reuse as the preferred destination for runoff, followed by infiltration, discharge to surface water bodies, and finally sewers as last resort.

The seven standards cover the full SuDS lifecycle:

1. Runoff Destination – Apply the runoff hierarchy, prioritising water reuse and infiltration where feasible.
2. Interception – Retain the first 5 mm of typical rainfall events through source-control features to reduce pollution and flow rates.
3. Peak Flow & Volume Control – Manage runoff for both frequent and extreme rainfall events, including climate change allowances, while ensuring safe exceedance routing.
4. Water Quality – Use a treatment-train approach to provide pollution mitigation appropriate to the site's risk profile.
5. Amenity – Deliver SuDS that positively contribute to public realm, landscape quality, and wellbeing.
6. Biodiversity – Maximise ecological value, integrating SuDS with habitat creation and local nature recovery objectives.
7. Construction, Operation & Maintenance – Ensure SuDS are buildable, resilient, and supported by clear, long-term maintenance arrangements.

Overall, the 2025 standards reinforce a shift towards SuDS as multifunctional green infrastructure, moving beyond simple drainage to systems that deliver environmental, social, and climate-resilience benefits. They inform site masterplanning, encourage multidisciplinary coordination, and highlight the importance of whole-life performance and maintenance.

3. Assessment of Flood Risk

Fluvial Flood Risk

As noted, the Flood Maps for Planning available on the Environment Agency website confirm that the site is located within Flood Zone 1 and is therefore considered to be at low risk of fluvial flooding.

Groundwater Flooding

Groundwater flooding generally occurs during intense, long-duration rainfall events, when infiltration of rainwater into the ground raises the level of the water table until it exceeds ground levels. It is most common in low-lying areas overlain by permeable soils and permeable geology, or where a naturally high groundwater table exists.

Reference has been made to British Geological Survey (BGS) geology mapping, which indicates that the site is underlain by Upper Tunbridge Wells Sand Formation (sandstone and siltstone).

The Environment Agency's groundwater flood alert mapping indicates that the site is located outside of designated groundwater flood alert areas.

Based on the above, and given that no basement development is proposed, the risk of groundwater flooding is considered to be low.

Surface Water Flooding

Surface water flooding results from rainfall-generated overland flow, occurring before runoff reaches a watercourse or drainage system, or where such systems are overwhelmed and unable to convey additional flows. Surface water flooding is typically associated with high-intensity rainfall events but may also occur during lower intensity rainfall where the ground is saturated, of low permeability, or where local topographic depressions cause temporary ponding.

Environment Agency surface water flood risk mapping indicates that the site is classified as having a “Very Low” risk of surface water flooding under both present-day and future climate change scenarios (2040–2060).

Artificial and Localised Water Features

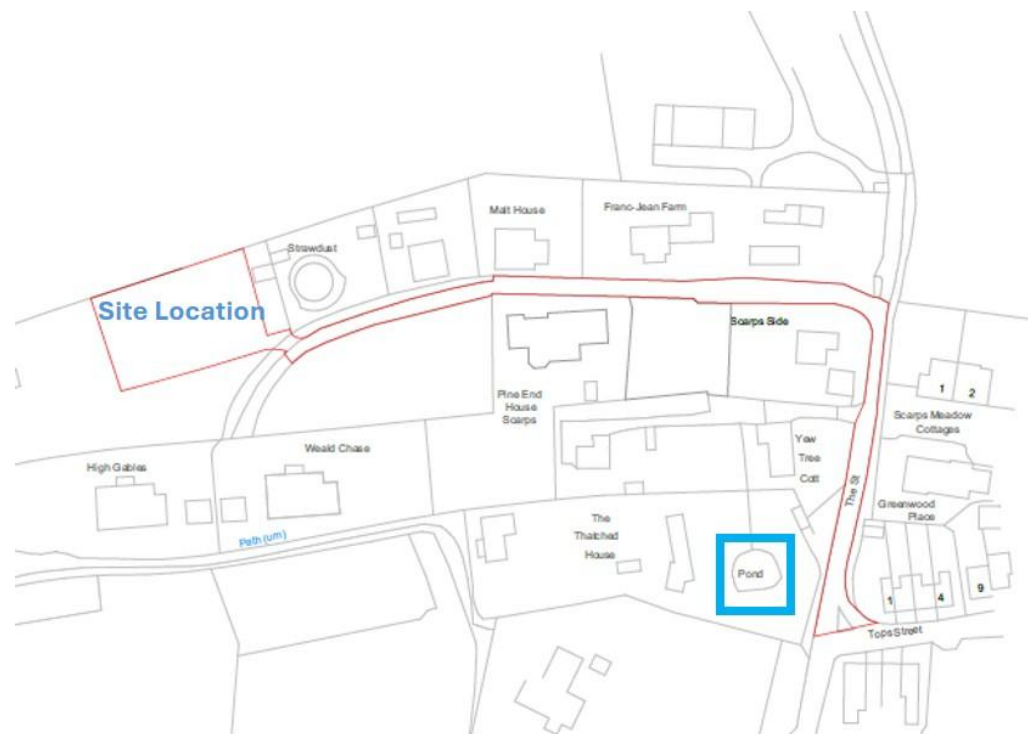
The Local Planning Authority has identified a pond located within land associated with The Thatched House, situated in proximity to the lower section of the existing access track serving the site. An indicative 20 m buffer associated with this feature is understood to extend towards the access corridor.

The pond is shown on the submitted site location plan; however, it is not clearly discernible within available aerial imagery, likely due to mature vegetation cover within the surrounding land parcel.

Based on available Ordnance Survey mapping, topographic information, and publicly accessible imagery, the hydrological characteristics of this feature, including any defined inflow or outflow mechanisms, cannot be confirmed at this stage. It is therefore considered to be an off-site, localised waterbody of uncertain hydraulic connectivity to the proposed development access.

The pond is not identified within Environment Agency flood risk datasets and does not form part of any mapped fluvial or pluvial flood risk mechanism affecting the site.

No evidence of historic flooding affecting the site or access track has been identified from the available mapping or publicly accessible records.



Whilst it is acknowledged that small ponds and localised depressions may respond to prolonged or intense rainfall events, there is currently no evidence to suggest that this feature provides a defined pathway for flooding to the application site.

4. Flood Mitigation

At the time of writing, the site is shown to be at overall low risk of flooding from all sources; therefore, no specific flood mitigation measures should be required in relation to fluvial, groundwater, or surface water flooding.

Surface water runoff management will be addressed in the subsequent drainage strategy section.

However, regard has been given to the Local Planning Authority's comments regarding the nearby pond and the implications for access.

Access and Residual Risk Considerations

Notwithstanding the above, it is recognised that low-lying, unbound rural access tracks may be susceptible to temporary surface water accumulation during extreme rainfall events. Such effects are typical of rural environments and are not uncommon in Flood Zone 1 settings.

The proposed development therefore remains acceptable in flood risk terms, subject to confirmation that safe access and egress can be maintained in accordance with national planning policy. This is expected to be achievable through standard rural access design considerations or, where necessary, appropriate maintenance of the access track or provision of alternative access arrangements.

5. Surface Water Management

The site comprises approximately 1000m², and is comprised entirely of greenfield land.

Following redevelopment, the proposed site coverage is anticipated to comprise:

Surface Type	Area
Roof Areas	170 m ²
Paved areas	70 m ²
Parking	75 m ²
Total	315 m²
 Total Soft Landscaped Area	 685 m²

The proposals therefore retain a significant proportion of permeable soft landscaping across the site.

Drainage Hierarchy

As previously noted, the preferred hierarchy for the management of surface water runoff is set out within the Mid Sussex District Plan and reflects the principles contained within Building Regulations Approved Document Part H.

The hierarchy is as follows:

1. Infiltration to ground;
2. Attenuation and discharge to a watercourse; and
3. Discharge to a surface water sewer, where the above are not feasible.

The proposed drainage strategy has been developed in accordance with this hierarchy.

1. Infiltration

As previously noted, the BGS geology mapping indicates that the site is underlain by Upper Tunbridge Wells Sand Formation (sandstone and siltstone).

BGS borehole records have also been reviewed; however, there are none available in the vicinity of the site.

Based on the published geological information, infiltration-based drainage may be feasible at the site. However, this would need to be confirmed through site-specific infiltration testing undertaken in accordance with BRE Digest 365.

The testing would be required to:

- confirm the suitability of the underlying strata for infiltration drainage; and
- establish an appropriate infiltration coefficient for design purposes.

Subject to acceptable infiltration test results, infiltration-based SuDS could provide the primary means of surface water disposal for the development.

It is considered reasonable that infiltration testing and detailed drainage design could be secured through an appropriately worded planning condition.

2. Attenuation and Discharge to Watercourse

There are no watercourses in the immediate vicinity of the site for direct connection of surface water.

3. Discharge to Surface Water Sewer

Given the potential feasibility of infiltration drainage, discharge to a surface water sewer is not presently considered necessary and would represent a lower priority option within the drainage hierarchy.

SuDS Strategy

Sustainable Drainage Systems (SuDS) are intended to replicate natural drainage processes by managing runoff close to its source and reducing the impact of development on the wider catchment.

In addition to controlling runoff quantity, SuDS can provide wider benefits including:

- reduction in surface water flood risk;
- improvement in water quality through treatment and filtration;
- groundwater recharge;
- biodiversity enhancement; and
- improved visual amenity.

The selection of appropriate SuDS measures for the site has been informed by the site layout, proposed land use, topography, and the anticipated underlying ground conditions.

Based on the drainage hierarchy and the preliminary review of geological conditions, it is considered that runoff from the proposed impermeable areas (totalling approximately 315m²) can be managed using infiltration-led drainage techniques, subject to confirmation through BRE 365 testing.

Permeable Paving and Infiltration Considerations

Permeable paving is proposed as a potential means of managing runoff from the proposed hardstanding areas, including driveways, roadways, and patio areas.

Permeable paving systems allow water to pass through the surface layer into an underlying sub-base, where runoff can either infiltrate into the ground or be conveyed via a controlled drainage system.

Typical permeable pavement systems include:

- **Type A – Infiltration Systems:**

Water infiltrates through the permeable surface into the underlying ground. These systems are suitable where infiltration rates are sufficient and can provide both attenuation and disposal of runoff.

- **Type B – Partial Infiltration / Lined Systems with Underdrain:**

Water infiltrates into the pavement sub-base with overflow discharge provided via perforated pipework or underdrains. These systems are suitable where infiltration is feasible but limited.

- **Type C – Tanked / No Infiltration Systems:**

An impermeable liner prevents infiltration to ground, with runoff conveyed to a separate drainage outfall following attenuation within the pavement structure.

In order to determine the most appropriate permeable paving arrangement, infiltration testing in accordance with BRE Digest 365 will be required.

The testing results will confirm:

- whether infiltration drainage is feasible;
- the likely infiltration performance of the underlying soils/strata; and
- whether a Type A, Type B, or Type C system would be most appropriate.

Subject to the findings of the infiltration testing, permeable paving could provide an effective means of managing runoff from the proposed hardstanding areas, including a 40% allowance for climate change, in accordance with SuDS principles.

Landscaping

The proposed landscaped areas will also contribute to the overall surface water management strategy by promoting interception, storage, and infiltration of runoff at source.

Through the use of soft landscaping, shallow grading, and vegetated flow paths, runoff will be directed away from buildings and hardstanding areas and allowed to disperse naturally across permeable surfaces where appropriate.

Native planting and grassed areas will assist in slowing overland flow velocities, reducing erosion potential, and increasing evapotranspiration and infiltration opportunities.

These measures will complement the wider SuDS strategy whilst also delivering ecological and visual amenity benefits across the site.

SuDS Delivery and Implementation Notes

- *The proposed SuDS strategy has been developed based on current understanding of the site layout, proposed development, and anticipated ground conditions. The final detailed design will be confirmed at the detailed design stage, informed by site-specific investigations undertaken in accordance with BRE Digest 365.*
- *The detailed drainage design will ensure that post-development runoff rates do not exceed existing greenfield runoff rates.*
- *The siting, design, and construction of all SuDS features will be agreed with Building Control, and all systems will be installed in accordance with the recommendations of the SuDS manufacturer, installer, and relevant best practice guidance.*
- *All surface water runoff generated by the development will be managed within the curtilage of the site, ensuring that the development does not increase flood risk to neighbouring land or the wider catchment.*
- *The surface water drainage strategy will operate on a gravity-based system only. No pumped drainage systems are proposed, thereby improving long-term resilience, reliability, and ease of maintenance.*
- *Where connection to the public sewer network is required, the necessary discharge consents will be obtained from the relevant Water Company prior to implementation.*
- *Appropriate water quality and pollution control measures, such as permeable paving, filter strips and/or oil separators where necessary, will be incorporated to ensure that surface water runoff is adequately treated prior to discharge, in line with SuDS best practice and water quality objectives.*

SuDS Maintenance

Operation and maintenance schedules are provided below (taken from Ciria C753 The SuDS Manual): these should be adopted by the management company.

Permeable Paving

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	Remove sediment from pre-treatment structures and/or internal forebays	Annually, or as required
Remedial Actions	Repair/ rehabilitate inlets, outlet, overflow, and vents	As required
Monitoring	Inspect/ check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build up and remove if necessary	Every five years, or as required

6. Conclusion

This Flood Risk Assessment and Surface Water Management Report has been prepared in support of the proposed development of a single residential dwelling with associated access, parking, and landscaping at land adjacent to Nightingales, Bolney, Haywards Heath, RH17 5PJ.

The assessment has been undertaken in accordance with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), the Mid Sussex District Plan 2014–2031, and the principles of the Non-Statutory Technical Standards for Sustainable Drainage Systems (2025).

Review of the Environment Agency Flood Maps confirms that the site is located wholly within Flood Zone 1 and is therefore at low risk of fluvial flooding. The assessment has also considered other potential sources of flooding, including groundwater, surface water, and localised artificial water features. Based on the available published mapping, geological information, and topographic review, the site is considered to be at overall low risk of flooding from all sources.

Consideration has been given to the Local Planning Authority's pre-application comments regarding the nearby pond adjacent to the lower section of the access track. Whilst the pond may represent a localised low point within the surrounding landscape, there is currently no evidence to suggest that it forms a defined flood pathway affecting the application site. The feature is not identified within Environment Agency flood risk datasets, and no evidence of historic flooding affecting the site or access has been identified from available records or mapping.

The proposed development will retain a substantial proportion of permeable soft landscaped area and incorporates an appropriate Sustainable Drainage Systems (SuDS) strategy in accordance with the drainage hierarchy. Infiltration-led drainage techniques are considered likely to be feasible at the site, subject to confirmation through site-specific BRE Digest 365 infiltration testing. It is considered appropriate that detailed infiltration testing and final drainage design are secured through a suitably worded planning condition.

The proposed drainage strategy will ensure that post-development runoff rates do not exceed existing greenfield runoff rates and that all surface water runoff generated by the development is managed within the site boundary wherever feasible. The use of permeable paving, soft landscaping, and source control measures will assist in reducing runoff rates and volumes, promoting infiltration, improving water quality, and delivering wider environmental and amenity benefits.

Overall, the proposed development is considered acceptable in flood risk and drainage terms. The development can be safely accommodated for its lifetime without increasing flood risk elsewhere and is therefore considered to accord with the requirements of national and local planning policy relating to flood risk and sustainable drainage.

Appendices

Appendix A - Site Location Plan



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Notes

Do not scale from this drawing except for planning purposes. All dimensions must be checked on site before any work begins.

All goods, materials, and workmanship must comply with current Building Regulations, British Standards, and relevant Codes of Practice.

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Drawing to be printed A3

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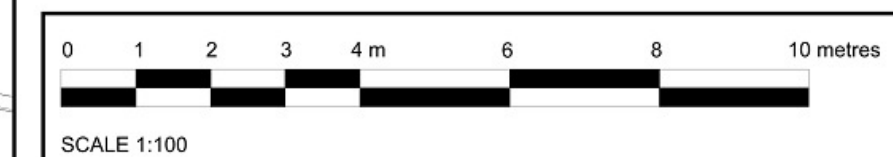
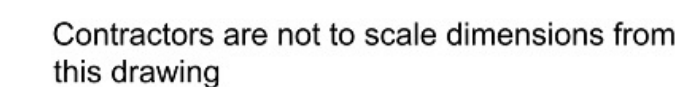
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Scale: 1:1250 Drawn: BI	Date: Checked: JS
Drawing No:	875 /100A

Appendix B - Proposed Site Layout Plan



REV	BY	DESCRIPTION	DATE
A	AR	boundary amended	18.5.26

 **landscape perspective**
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Project
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Title
Landscape strategy

Status		
for planning		
Scale	Drawn	Date
1:100 @ A1	AR	May 2026
Job number	Drawing number	Revision
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